

STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD

In the Matter of:)
)
)
CONSIDERATION OF A PROPOSED)
RESOLUTION TO ADOPT A WATER)
QUALITY CONTROL PLAN FOR)
ENCLOSED BAYS AND ESTUARIES -)
PART 1 SEDIMENT QUALITY.)
)
~~~~~ )

JOE SERNA JR./CalePA BUILDING  
1001 I STREET  
COASTAL HEARING ROOM  
SACRAMENTO, CALIFORNIA

AGENDA ITEM 9

TUESDAY, SEPTEMBER 16, 2008

10:09 A.M.

LINDA KAY RIGEL, CSR  
CERTIFIED SHORTHAND REPORTER  
LICENSE NUMBER 13196

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

APPEARANCES

BOARD MEMBERS

Ms. Tam M. Doduc, Chair

Mr. Arthur G. Baggett, Jr., Member

Mr. Charles "Charlie" R. Hoppin, Member

Ms. Frances Spivy-Weber, Member

STAFF

Chris Beegan, Division of Water Quality

Mr. Dominic Gregorio, Division of Water Quality

Ms. Sheila Vassey, Office of Chief Counsel

Mr. Steve Bay, principal scientist for the Southern  
California Coastal Water Research Project

ALSO PRESENT

Mr. David Arrieta, Western States Petroleum  
Association

Mr. Eric Katz, Latham & Watkins

Dr. Donovan Bodishbaugh

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I N D E X

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## 1 P R O C E E D I N G S

2 --o0o--

3 CHAIRPERSON DODUC: We're now on Item No. 9.  
4 I believe I have a statement that I'm required to read.  
5 So if the staff would please come on up. Right.

6 Good morning. This public hearing is called  
7 to order. Today the State Water Resources Control  
8 Board will take public comment and deliberate on the  
9 proposed Water Quality Control Plan for enclosed bays  
10 and estuaries, Part 1, sediment quality.

11 In July 2008, Board staff recirculated the  
12 proposed Water Quality Control Plan for enclosed bays  
13 and estuaries, Part 1, sediment quality plan and draft  
14 staff report.

15 As most of you know, the State Water Resources  
16 Control Board adopted the plan in resolution 2008-14 on  
17 February 19, 2008. The plan and administrative record  
18 were submitted to the Office of Administrative Law on  
19 February 29, 2008.

20 During its review of the administrative  
21 record, the Office of Administrative Law noted that the  
22 record did not include a required newspaper  
23 notification of the public hearing on the plan. As a  
24 result, the State Water Board must rehear this item.

25 Staff present today includes Chris Beegan,

1 Dominic Gregorio from Division of Water Quality, and  
2 Sheila Vassey from the office of Chief Counsel.  
3 Representing the science team is Mr. Steve Bay,  
4 principal scientist for the Southern California Coastal  
5 Water Research Project.

6 Oral presentations will be limited to five  
7 minutes. No written comments, exhibits, or other  
8 documents will be accepted today.

9 The order for presentations for this hearing  
10 will be as follows: First, the staff will make a brief  
11 presentation, then we will hear comments from  
12 interested parties.

13 Anyone wishing to make a statement today  
14 should fill out a blue speaker's card if you have not  
15 already done so. When making your comments, please  
16 identify yourself by name and affiliation so that we  
17 can have them in the record.

18 And we do have a court reporter here for this  
19 item.

20 Speakers will be called in the order in which  
21 I have received the cards. If you are not sure -- I  
22 always hate that statement, so I'm not going to read  
23 it.

24 With that, we will proceed to the staff  
25 presentation. Mr. Beegan?

1           MR. BEEGAN: Good morning, Madam Chair and  
2 Members of the Board.

3           My name is Chris Beegan from the Division of  
4 Water Quality. Because we have met a number of times  
5 on this item, my opening presentation will be very  
6 short.

7           The Draft Water Quality Control Plan for  
8 Enclosed Bays and Estuaries - Part 1 Sediment Quality  
9 contains a narrative sediment quality objective and  
10 associated interpretive tools intended to protect  
11 benthic communities; a narrative sediment quality  
12 objective intended to protect human health; the means  
13 by which the narrative objectives will be implemented  
14 and integrated within existing water quality programs;  
15 and finally flowcharts that describe how an exceedance  
16 of the narrative will drive stressor identification and  
17 development of TMDL targets as well as revised NPDES  
18 permit limits.

19           While staff made a variety of changes to the  
20 July 2008 draft staff report in order to clarify or  
21 better support the technical approach, there were only  
22 two specific changes made to the proposed Water Quality  
23 Control Plan.

24           The first change was in regards to reasonable  
25 potential in Section VII.B. Previously, we had stated

1 that the Regional Boards may apply the objectives as  
2 receiving water limits if the receiving water was  
3 potentially at risk.

4 In the July 2008 draft, we amended the  
5 language to say Regional Boards shall apply the  
6 objectives as receiving water limits if there was  
7 evidence of reasonable potential.

8 This change was made because the Clean Water  
9 Act and permit regulations require that a permit  
10 include appropriate limits if the discharge of a  
11 pollutant has the potential to cause or contribute to  
12 the exceedance of a water quality standard.

13 The second change was made to Section VII.H,  
14 first paragraph, where we -- where language was added  
15 stating that site-specific management guidelines  
16 developed for clean-up actions must comply with  
17 Resolution 9249.

18 In regards to the comment period ending  
19 September 5, 2008, the Clerk to the Board received  
20 three comment letters representing members of the  
21 regulated community, four comment letters from  
22 environmental advocacy groups, one comment letter from  
23 a private consultant, and finally two comment letters  
24 from the general public.

25 The comments were similar to those received in

1 the past.

2 The commenters generally objected to the  
3 limited number of receptors protected, the lines of  
4 evidence or specific indicators being proposed, the  
5 revised reasonable potential language, and finally the  
6 public process.

7 Unless there are any questions, that ends my  
8 staff presentation.

9 CHAIRPERSON DODUC: Thank you, Mr. Beegan.

10 Do I have any comment cards for this item?  
11 We'll hear first from Mr. Arrieta representing WSPA and  
12 then Eric Katz representing Latham & Watkins.

13 MR. ARRIETA: Good morning.

14 My name is David Arrieta. I'm here  
15 representing the Western States Petroleum Association,  
16 and we have been part of the SQO development process  
17 since its inception.

18 And we're here generally in support of the  
19 policy as has been developed. We are very supportive  
20 of the multiple lines of evidence, and we are also very  
21 supportive of the stressor identification part.

22 Which brings us to the point that Mr. Beegan  
23 just raised regarding the change in the determinations  
24 part, Section VII.B.1, where the new policy has moved  
25 from -- it used to read "may" apply the SQOs in permits



1 to "shall" apply the SQOs in the permits.

2 And we are concerned that unless the policy  
3 explicitly says that this is after the stressor  
4 identification part that implementing that part in a  
5 "shall" is going to be problematic.

6 So we would like to see the language revert  
7 back to the way it was in the previous section or in  
8 the previous policy that was adopted in the past.

9 That's our only issue. Hopefully, you know,  
10 we could go back to the "may," depending on the  
11 stressor identification exercise. Thank you.

12 CHAIRPERSON DODUC: Mr. Katz, and then --

13 MR. KATZ: Good morning, Chair --

14 CHAIRPERSON DODUC: Mr. -- I'm sorry -- and  
15 then Thomas. . . .

16 MR. KATZ: Bodishbaugh?

17 CHAIRPERSON DODUC: Yes. Thank you.

18 MR. KATZ: Good morning, Chair Doduc and Board  
19 Members.

20 My name is Eric Katz. I'm an attorney with  
21 Latham & Watkins here today representing California  
22 Chamber of Commerce, General Electric Company, Montrose  
23 Chemical Corporation of California and NASSCO.

24 As the gentleman from WSPA just said that he's  
25 been involved in the administrative process, so too

1 have my clients for many years leading up to this Phase  
2 I.

3 We're also participating with staff in the  
4 development of Phase II or Part 2 on human health and  
5 look forward to continuing to do so.

6 And I appreciate that the State Board is  
7 considering all comments that have been previously made  
8 up to the February 2008 hearing to be part of the  
9 administrative record for the action that's being  
10 considered today, so I won't repeat all the comments  
11 that have been previously made.

12 But suffice it to say we had significant  
13 concerns that we raised up through February. The  
14 changes that Mr. Beegan mentioned that have been made  
15 to the SQO don't really address the key concerns that  
16 we previously raised, so the concerns as previously  
17 stated still remain.

18 And indeed, as you'll hear from Dr.  
19 Bodishbaugh as well as a statement from Dr. Ginn, there  
20 have been some new developments in the published  
21 literature discussing the usefulness of the methods  
22 that are used in the chemistry line of evidence and  
23 which only reinforce the previous concerns that we had  
24 with the chemistry line of evidence.

25 So we remain willing to work with the State

1 Board to the extent that you don't proceed to adopt  
2 today to make the revisions on Part 1 and continue to  
3 remain willing and able to work on Part 2 as well.

4 Thank you.

5 CHAIRPERSON DODUC: And in the event that we  
6 do adopt this, I assume you will still remain willing  
7 to work with us.

8 MR. KATZ: Absolutely. I didn't intend to --

9 (Laughter)

10 CHAIRPERSON DODUC: I just wanted to make  
11 sure.

12 MR. KATZ: Thank you.

13 CHAIRPERSON DODUC: All right.

14 Mr. Thomas, welcome. And then followed by Mr.  
15 Donovan Bodishbaugh.

16 DR. BODISHBAUGH: Actually, I'm Donovan  
17 Bodishbaugh.

18 CHAIRPERSON DODUC: Okay.

19 DR. BODISHBAUGH: Dr. Ginn is my colleague,  
20 and he can't be here today. I have his statement that  
21 with your permission I'd like to read.

22 CHAIRPERSON DODUC: As long as both yours and  
23 his are under five minutes.

24 DR. BODISHBAUGH: That may be a stretch.

25 In any case, I'll read Dr. Ginn's statement at

1 this time:

2 Chair Dudoc and Members of the Board, I  
3 appreciate the opportunity to introduce  
4 these comments for your consideration  
5 regarding readoption of proposed SQOs.  
6 My comments primarily concern the use of  
7 theoretical sediment quality values, or  
8 SQVs, as part of the chemistry line of  
9 evidence, or LOE, in the overall  
10 development of SQOs for the State of  
11 California, although I also have  
12 significant disagreements with elements  
13 of both the toxicity and benthic  
14 community LOEs as described in the  
15 current SQO documentation.  
16 As proposed in the draft staff report,  
17 the SQO chemistry line of evidence score  
18 is derived from two indices, the  
19 chemical score index, or CSI, and the  
20 maximum probability of sediment  
21 toxicity, or PMax, predicted by the  
22 California logistic regression model.  
23 While these are novel indices developed  
24 or adapted specifically for use in the  
25 SQO process, both of these indices are

1           simple empirical SQVs similar in form  
2           and derivation to other SQVs such as  
3           Long and Morgan's ERLs and ERMs or the  
4           TELs and PELs of MacDonald, et al which  
5           are familiar to all sediment assessors.  
6           I recently co-authored an article  
7           published in the April 2008 edition of  
8           the peer-reviewed journal Integrated  
9           Environmental Assessment and Management  
10          discussing the limited value of SQVs  
11          which I understand has been provided to  
12          you.

13          The basis of the CSI is a set of  
14          theoretical predictions of sediment  
15          chemical concentrations that are likely  
16          to cause benthic community disturbance.  
17          The PMax value, as its name suggests, is  
18          a theoretical prediction of the  
19          probability that a given sediment  
20          chemical concentration will cause  
21          toxicity.

22          All SQVs are a theoretical prediction of  
23          the likelihood of biological effects  
24          which are made using only site chemical  
25          data. Their only legitimate use is as a

1 screening tool to assess the potential  
2 of settlement contaminants to cause  
3 adverse biological effects prior to  
4 conducting sediment toxicity tests or  
5 benthic community surveys.  
6 Once actual measured data on biological  
7 effects have been collected, these --  
8 those empirical site-specific  
9 measurements should supersede  
10 theoretical predictions made by SQVs.  
11 Estimates of effect thresholds like  
12 those relied upon by the CSI and the  
13 California logistic regression model are  
14 uncertain surrogates for actual  
15 measurements of biological effects, and  
16 their use is inappropriate when such  
17 measurements exist.  
18 Now the SQO staff report describes the  
19 proposed process as an adaptation of a  
20 sediment quality triad approach.  
21 The concept of triad sediment assessment  
22 as it is normally employed and  
23 understood by sediment assessment  
24 practitioners is to simultaneously  
25 assess sediment chemistry toxicity and

1           benthic community structure at a site.  
2           The questions asked and answered by the  
3           triad method are the following: Are  
4           chemical concentrations in sediments  
5           elevated at the site? Are the site  
6           sediments toxic? And are there  
7           abnormalities in the site benthic  
8           community structure?  
9           Synoptic measurements that address these  
10          three questions should be evaluated  
11          together to make an assessment of  
12          whether adverse effects are occurring at  
13          the site as a result of elevated  
14          chemical concentrations.  
15          The chemistry LOE should be solely a  
16          measure of whether or not chemical  
17          concentrations in sediments are  
18          elevated, not whether chemicals at those  
19          concentrations reflect thresholds of  
20          adverse biological effects.  
21          The sediment toxicity and benthic  
22          community lines of evidence assess  
23          biological effects directly.  
24          The appropriate use of a chemistry LOE  
25          and a triad assessment is a quantitative

1 comparison to background levels or some  
2 other relevant reference conditions.  
3 By using sediment quality value  
4 comparisons as the basis of the  
5 chemistry LOE, the proposed SQO process  
6 corrupts the triad approach.  
7 The chemistry LOE as proposed in this  
8 case is nothing more than a screening  
9 level assessment for adverse effects.  
10 The proposed approach completely fails  
11 to assess which chemical concentrations  
12 in sediments are actually elevated.  
13 The theoretical screening level  
14 predictions made by comparison of site  
15 data to generic sediment quality values  
16 are actually a step back in accuracy of  
17 the assessment of adverse biological  
18 effects given that direct measurements  
19 of both toxicity and benthic community  
20 structure constitute the other two lines  
21 of evidence.  
22 In effect, the sediment quality  
23 objective chemistry LOE adds no useful  
24 information on site chemistry to the  
25 assessment and only dilutes the observed



1 data on biological responses in the  
2 sediment with theoretical predictions.  
3 Nothing about the derivation of the CSI  
4 or PMax value differs significantly from  
5 other published sediment screening  
6 values in any way that would decrease  
7 their inherent limitations as described  
8 in Dr. Ginn's article.

9 Apart from the inappropriateness of  
10 using any sediment quality value to  
11 characterize site chemistry, the SQO  
12 scoring scheme force-fits all the  
13 quantitative measurements into a low  
14 resolution integer scale of 1 to 4  
15 resulting in a low-precision, highly  
16 arbitrary metric of putative  
17 contamination.

18 CHAIRPERSON DODUC: Thank you.

19 Since no additional evidence or testimony is  
20 being accepted today, I assume this letter is already  
21 in the record and staff has already responded to the  
22 comments as part of the written responses to comments.

23 Is that correct, Mr. Beegan? Microphone,  
24 please.

25 MR. BEEGAN: Yes. We responded to their

1 comments regarding empirical line --

2 CHAIRPERSON DODUC: Please provide a short  
3 synopsis for the speakers' benefits.

4 MR. BEEGAN: Can I ask Mr. Bay to provide that  
5 synopsis, please.

6 CHAIRPERSON DODUC: All right.

7 MR. BAY: Good morning. Certainly, I think  
8 the technical -- the science team recognizes the  
9 general relative weakness and I would say relatively  
10 low resolution of the chemical line of evidence.

11 This is an issue that's been acknowledged in  
12 the literature, and what the SQO program represents is  
13 really the best and most practical application of this  
14 chemistry.

15 You know, the analyses that we've done and  
16 others have done, you know, have demonstrated that this  
17 approach, using the SQVs similar to what we have in the  
18 program, does provide added benefit in terms of  
19 assessing sites in a screening mode and has predictive  
20 utility.

21 So, you know, these issues certainly  
22 acknowledge that there are these limitations.

23 As far as, I'd say, adding no particular value  
24 to the assessment, in the course of developing the  
25 assessment framework, we looked at an option of

1 eliminating the chemistry line of evidence.

2           And when we compared the results of that  
3 assessment to essentially a gold standard of experts  
4 using best professional judgment -- and these are  
5 individuals with a high level of expertise -- we found  
6 that actually the accuracy rate of the SQO framework  
7 was improved.

8           It was better with inclusion of the chemistry  
9 line of evidence than it was if it was eliminated and  
10 one relied only on the biological effects.

11           So we looked at this issue. And like I said,  
12 we acknowledge that more work needs to be done. What  
13 this represents is really the best available approach  
14 that we can demonstrate through the calibration of the  
15 chemistry data to be effective and appropriate for the  
16 California situation.

17           CHAIRPERSON DODUC: Thank you.

18           Ms. Spivy-Weber?

19           BOARD MEMBER SPIVY-WEBER: You said that more  
20 work needed to be done. Exactly how is that going to  
21 unfold? Is it something that will happen over the next  
22 ten years or year?

23           MR. BAY: Well, certainly there are several  
24 very good opportunities to reevaluate the tools for  
25 their effectiveness and to improve upon them.

1           Specifically, the SQO program is funding,  
2 ongoing right now, a large-scale survey of sediment  
3 quality in the Delta environment. So we've collected  
4 150 stations. We're looking at the triad approach.  
5 This will help us evaluate these tools for their  
6 relevance to the Delta and improve upon them.

7           And part of that is including some of these  
8 more advanced, sophisticated measurements, what are  
9 often called sort of the mechanistic or equilibrium  
10 partitioning-type guidelines. So that's sort of the  
11 next more chemistry sophisticated step.

12           Then also in addition to that, the various  
13 monitoring programs that are ongoing right now in  
14 southern California and San Francisco Bay and other  
15 areas are going to be collecting additional data.

16           So over the course of the next couple years,  
17 we'll have probably about another 2- to 300 data points  
18 for these habitats that we can use to test out these  
19 concerns about the resolution and the accuracy of these  
20 guidelines, so a completely independent data set that  
21 will allow us to address some of these concerns about,  
22 you know, are the results misleading or are they  
23 accurate.

24           So we will have those opportunities.

25           BOARD MEMBER SPIVY-WEBER: And how will the

1 speakers and others who are interested keep up with  
2 what's going on? Will there be -- you have a new  
3 website now, and so are you -- or you will have it up  
4 soon.

5 MR. BAY: Yeah, yeah. So you have a little  
6 advance information.

7 But SCCWRP probably around the end of October,  
8 mid October, will have a new website that will have  
9 more project-specific information on it, including the  
10 SQO program from the technical side. So that's a  
11 better source of information.

12 In addition, the key informational  
13 opportunities that are there are two-fold.

14 One is the periodic meetings of the  
15 stakeholder advisory committee which are open to the  
16 public. And, you know, Mr. Katz and others have  
17 attended those in the past, and they are welcome to  
18 keep going.

19 In addition, we have generally approximately  
20 annual meetings of the scientific steering committee  
21 which are the independent experts that review our work.  
22 Those are also open to the public and widely advertised  
23 on the list serve. So all can come, and they can  
24 contribute comments and learn as we do.

25 CHAIRPERSON DODUC: Let's go quickly back to

1 Mr. Arrieta's comments.

2 I'm actually in favor of providing as clear  
3 language as possible in our policies, especially when  
4 it comes to the Regional Boards question, because we've  
5 all heard concerns about consistency issues.

6 But in acknowledgement of what Mr. Arrieta  
7 said, could staff please explain the change from "may"  
8 to "shall."

9 STAFF COUNSEL VASSEY: Yes, I can do that.

10 The Clean Water Act and permit regulations, as  
11 Chris Beegan indicated, require that permits include  
12 appropriate limits where necessary to meet water  
13 quality standards.

14 And the regulations specifically say that  
15 where the discharge of a pollutant has a reasonable  
16 potential to cause or contribute to a violation of a  
17 standard the permit must include an appropriate limit.

18 Having said that, the inclusion of a limit is  
19 not automatic by any means. The Regional Board has to  
20 have evidence that would justify including the limit.  
21 They have to have evidence showing that there is  
22 reasonable potential.

23 So the types of evidence that they would look  
24 at are the types of pollutants being discharged, their  
25 toxicity, the characteristics of the pollutants,

1 whether they are bioaccumulative, the characteristics  
2 of the receiving water, and so on.

3 And the Regional Boards, as I said, have to  
4 justify including the limit; but once they have done  
5 that, then they have to include a limit.

6 The commenters have suggested that the  
7 Regional Boards wait until after stressor  
8 identification.

9 The problem with that is that at that point  
10 the Regional Board will have already concluded that the  
11 data shows that the sediments are impacted to some  
12 extent, and the whole point of putting a permit limit  
13 in is to be proactive, to prevent an exceedance as  
14 opposed to reacting after the fact.

15 CHAIRPERSON DODUC: Thank you, Ms. Vassey.

16 Any other questions or discussion of this  
17 item? I will entertain a motion.

18 BOARD MEMBER SPIVY-WEBER: Move we adopt.

19 BOARD MEMBER BAGGETT: Second.

20 CHAIRPERSON DODUC: The motion was made by  
21 Ms. Spivy-Weber, and second by Mr. Baggett. All in  
22 favor?

23 (Ayes)

24 CHAIRPERSON DODUC: Any opposed or abstain?

25 Not hearing any, the motion is carried. Thank you all.

1           And I do want to acknowledge the speakers'  
2    comments. I think we all understand -- we understood  
3    this in February -- that there is much, much remaining  
4    to do in terms of understanding and development of  
5    SQOs.

6           And I thank you for your engagement of this  
7    issue, and I hope you will continue to engage with the  
8    staff as we struggle to tackle this difficult  
9    challenge.

10           So thank you.

11                                 \*   \*   \*

12                                 (Thereupon the WATER RESOURCES CONTROL  
13                                 BOARD proceedings regarding Item 9  
14                                 concluded at 10:32 a.m.)

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1 CERTIFICATE OF REPORTER

2 I, LINDA KAY RIGEL, a Certified Shorthand  
3 Reporter of the State of California, do hereby certify:

4 That I am a disinterested person herein; that  
5 the foregoing WATER RESOURCES CONTROL BOARD proceedings  
6 regarding Item 9 were reported in shorthand by me,  
7 Linda Kay Rigel, a Certified Shorthand Reporter of the  
8 State of California, and thereafter transcribed into  
9 typewriting.

10 I further certify that I am not of counsel or  
11 attorney for any of the parties to said meeting nor in  
12 any way interested in the outcome of said meeting.

13 IN WITNESS WHEREOF, I have hereunto set my  
14 hand this September 22, 2008.

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