

SAN DIEGO BAY SHIPYARD SEDIMENT SITE

SAN DIEGO REGIONAL
WATER QUALITY
CONTROL BOARD

TENTATIVE CLEANUP AND ABATEMENT ORDER NO. R92011004 A 9 37


Designated Party: San Diego Gas & Electric Company

Represented By: Jill A. Tracy
San Diego Gas & Electric Company
101 Ash Street
San Diego, CA 92101
Tel: (619) 699-5112
jtracy@semprautilities.com

and

Represented By: Ward L. Benshoof; Peter A. Nyquist; Catherine M. Wieman
Alston & Bird LLP
333 South Hope Street, 16th Floor
Los Angeles, CA 90071
Tel: (213) 576-1142
ward.benshoof@alston.com
pete.nyquist@alston.com
catherine.wieman@alston.com



A  Sempra Energy[®] utility

SAN DIEGO REGIONAL
WATER QUALITY
CONTROL BOARD

2011 JUN 24 A 9:37

Jill A. Tracy
Senior Counsel
101 Ash Street, HQ12-D
San Diego, CA 92101-3017

Tel: (619) 699-5112
Fax: (619) 696-4488

VIA HAND DELIVERY

June 23, 2011

Frank Melbourn
Water Resource Control Engineer
San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123

**Re: In the Matter of: Tentative Cleanup and Abatement Order No. R9-2011-0001
Rebuttal Legal Argument by San Diego Gas & Electric Company
TCAO R9-2011-0001**

Dear Mr. Melbourn:

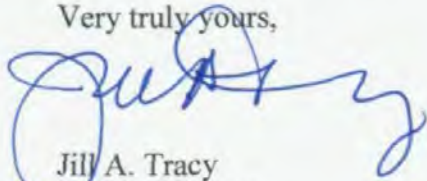
Pursuant to the Third Amended Order of Proceedings in this matter, enclosed herewith are the following documents submitted by San Diego Gas & Electric Company:

1. SAN DIEGO GAS & ELECTRIC COMPANY'S MOTION IN LIMINE TO EXCLUDE SAN DIEGO UNIFIED PORT DISTRICT'S EXPERT DECLARATIONS;
2. DECLARATION OF JILL A. TRACY IN SUPPORT OF SAN DIEGO GAS & ELECTRIC COMPANY'S MOTION IN LIMINE TO EXCLUDE SAN DIEGO UNIFIED PORT DISTRICT'S EXPERT DECLARATIONS;
3. SAN DIEGO GAS & ELECTRIC COMPANY'S REPLY COMMENTS, REBUTTAL EVIDENCE AND REBUTTAL LEGAL ARGUMENT;
4. TECHNICAL COMMENTS ON MAY 26, 2011 DOCUMENTS SUBMITTED ON BEHALF OF PARTIES TO THE SAN DIEGO SHIPYARD SEDIMENT SITE

Frank Melbourn
San Diego Regional Water Quality Control Board
June 23, 2011
Page 2

Please contact me if there are any questions.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Jill A. Tracy". The signature is fluid and cursive, with a large initial "J" and "T".

Jill A. Tracy
Senior Counsel

1 OFFICE OF THE GENERAL COUNSEL
2 JILL A. TRACY (State Bar No. 182136)
3 101 Ash Street, 12th Floor
4 San Diego, CA 92101
5 Telephone: (619) 699-5112
6 Facsimile: (619) 696-4488
7 jtracy@semprautilities.com

8 WARD L. BENSHOOF (State Bar No. 054987)
9 PETER A. NYQUIST (State Bar No. 180953)
10 CATHERINE M. WIEMAN (State Bar No. 222384)
11 MARISA E. BLACKSHIRE (State Bar No. 250156)
12 ALSTON & BIRD LLP
13 333 South Hope Street, Sixteenth Floor
14 Los Angeles, CA 90071
15 Telephone: (213) 576-1000
16 Facsimile: (213) 576-1100

17 Attorneys for Designated Party,
18 SAN DIEGO GAS & ELECTRIC COMPANY

19 CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
20 SAN DIEGO REGION

21 IN THE MATTER OF:
22
23 TENTATIVE CLEANUP AND
24 ABATEMENT ORDER NO. R9-2011-0001

25 **SAN DIEGO GAS & ELECTRIC**
26 **COMPANY'S MOTION IN LIMINE TO**
27 **EXCLUDE SAN DIEGO UNIFIED PORT**
28 **DISTRICT'S EXPERT DECLARATIONS**

1 **I. INTRODUCTION**

2 San Diego Gas & Electric Company (“SDG&E”) respectfully moves the Presiding Officer to
3 exclude from the administrative record expert declarations submitted by Designated Party San Diego
4 Unified Port District (“Port”), and any statement or testimony relied upon in the Port’s Submission of
5 *Comments, Evidence and Legal Argument* (“Comments”) filed on May 26, 2011, and supported by
6 same. The Declarations are deficient in several key respects. First and foremost, the Port failed to
7 comply with the March 11, 2011 deadline to serve expert reports, as set forth in the Discovery Order
8 established for these proceedings.¹ In doing so, the Port not only seeks to circumvent express pro-
9 cedural requirements all other Designated Parties agreed to and complied with, but unilaterally, and
10 irrevocably, waived its right to submit or rely on the Declarations in connection with its Comments
11 filed on May 26, 2011. In addition, the Declarations are substantively deficient, insofar as they neither
12 constitute nor include expert reports and, as such, fail to provide a sufficient basis for SDG&E and
13 other parties to rebut the opinions proffered therein. Consequently, unless the Declarations are
14 excluded from the record, the Port’s tactics will unduly prejudice SDG&E and the other parties to this
15 proceeding.

16 The Declarations SDG&E seeks to exclude, filed in support of the Port’s Comments, are as
17 follows: Declaration of Expert D. Michael Johns, Ph.D., (“Johns Declaration”); Declaration of Expert
18 Ying Poon, D.Sc, P.E. (“Poon Declaration”); and Declaration of Robert Collacott (individually, the
19 “Collacott Declaration,” and, together with the Johns Declaration and Poon Declaration, the
20 “Declarations”).

21 Specifically, this motion is brought on the grounds that: (1) the Declarations, and any opinions
22 rendered therein on behalf of the Port, are untimely filed and violative of the Discovery Order,
23 applicable California Code of Civil Procedure (“CCP”) provisions, and Regional Water Quality
24

25
26 ¹ The “Discovery Order” refers to the San Diego Regional Water Quality Control Board’s October 27, 2010,
27 “Order Reopening Discovery Period, Establishing Discovery Schedule, and Identifying Star and Crescent Boat
28 Company as a Designated Party for Purposes of Tentative Cleanup and Abatement Order No. R9-2011-0001.”

1 control Board ("Regional Board") regulations;² and (2) the failure to timely produce adequate expert
2 reports, and untimely submittal of Declarations, have prejudiced SDG&E and all other parties that
3 have complied with express requirements of the Discovery Plan. Therefore, the Declarations and any
4 briefing based thereon must be stricken from the record.

5 **II. FACTUAL BACKGROUND**

6 On February 18, 2010, the Regional Board adopted its "Order Issuing Final Discovery Plan for
7 Tentative Cleanup and Abatement Order No. R9-2010-0002 and Associated Draft Technical Report."
8 This Order substantially reflected a discovery proposal submitted by the various "mediation parties."
9 Notably, while the Port had notified the Regional Board and other Designated Parties that it had
10 withdrawn from the mediation, the Regional Board noted the proposed discovery plan "governs
11 discovery to be conducted by all designated parties to the proceeding, whether or not they continue to
12 be participants in the mediation." (*Id.* at p. 2). The proposed discovery plan was intended to focus on
13 cleanup levels and liability issues, and included a schedule for fact and expert discovery.

14 On September 15, 2010, the San Diego Water Board Cleanup Team released a revised Tenta-
15 tive Cleanup and Abatement Order No. R9-2011-001 ("TCAO") and supporting draft technical report
16 ("DTR"). (*See* Declaration of Jill A. Tracy submitted herewith ("Tracy Declaration"), ¶ 2.) The
17 revised TCAO/DTR changed the prior DTR in a number of respects, and for the first time identified
18 the Port as a Discharger. (*See id.*) Shortly thereafter, on October 19, 2010, the Port submitted its
19 Motion to Re-open and Extend Discovery Deadlines in the matter of the TCAO/DTR. (*See* Tracy
20 Declaration, ¶ 3.) This motion was ultimately granted via the Discovery Order. (*See* Tracy
21 Declaration, ¶ 4.) The final discovery plan was adopted pursuant to the Discovery Order of October
22 27, 2010.

23 The Discovery Order limited the scope of additional discovery to discovery "directed at finan-
24 cial resources/insurance assets against Port tenant/dischargers" and "revisions to the TCAO/DTR

26 ² The Discovery Order incorporates Sections I (Types of Permissible Discovery) and Sections II
27 A. and B. (Preservation of Procedural and Due Process Rights) of the Order Issuing Final Discov-
28 ery Plan for Tentative Cleanup and Abatement Order No. R9-2010-0002 and Associated Draft
Technical Report, dated February 18, 2010 ("Discovery Plan").

1 released on September 15, 2010 as compared to the December 2009 versions of these documents”
2 directed at the San Diego Regional Board’s Cleanup Team. (*Id.*, at pgs. 2-3.) Additionally, the
3 Discovery Order reopened the discovery period and extended many of the deadlines contained in the
4 original discovery schedule, as set forth in the Discovery Plan. (*See id.*, at pgs. 3-4.) The Discovery
5 Order: (1) established January 18, 2011 as the last day for the Port to designate expert and non-expert
6 witnesses for all purposes, and (2) designated March 11, 2011 as the last day for discovery and the last
7 day to submit expert reports. (*See id.*, at pg. 4.) The latter deadline is of particular importance, given
8 the Designated Parties’ agreement to forego expert depositions during this stage of this proceeding.
9 (*See Tracy Declaration*, at ¶ 4.)

10 In accordance with the Discovery Order, the Port submitted its Designation of Expert and Non-
11 Expert Witnesses on January 18, 2011. (*See Tracy Declaration*, ¶ 6.) Within that document, the Port
12 designated Ying Poon, D.Sc, Dr. Michael Johns, and Robert Collacott as experts retained for purposes
13 of this proceeding. (*See id.*, at pg. 2.) On March 11, 2011 – the discovery cut-off established by the
14 Regional Board and last day for submission of expert reports – SDG&E and the other Designated
15 Parties submitted expert reports and writings. The Port did not. (*See Tracy Declaration*, at ¶ 7.)

16 Thereafter, on May 26, 2011, the Port submitted its Comments together with nineteen exhibits
17 relied upon therein. (*Tracy Declaration*, ¶ 8.) Included among those exhibits are the Declarations.
18 (*Tracy Declaration*, ¶ 9.) Each of the Declarations includes unsupported, conclusory opinions
19 concerning issues relevant to the Regional Board’s liability and remedial driver determination, with
20 general references to documents contained in the Administrative Record in support of the opinions.
21 (*See id.*)

22 For example, the Declaration of Michael Johns provides sweeping conclusions regarding the
23 alleged impacts of contaminated sediments on aquatic and human health and the adequacy of the pro-
24 posed remedial action footprint. (*See Tracy Declaration*, ¶ 9.) Ying Poon’s conclusions regarding
25 whether Chollas Creek could be a major source of contaminants at the Shipyard Site are similarly
26 devoid of specific facts and evidence. (*Id.*) Finally, Robert Collacott’s opinions regarding the MS4
27

1 Permit compliance program and whether stormwater flowing into the MS4 operated by the Port caused
2 or contributed to the contamination of the Shipyard Site are almost entirely unsubstantiated. (*Id.*)

3 Between March 11, 2011 and May 26, 2011, the date the Port filed its Comments, the Port did
4 not contact SDG&E regarding its failure to provide expert reports. (Tracy Declaration, ¶ 11.) More-
5 over, SDG&E is not aware of any communications between the Port and any other party to this
6 proceeding regarding reports prepared by or opinions provided by the Port's expert witnesses. (Tracy
7 Declaration, ¶ 12.) To date, the Port has not provided copies of any expert reports or writings prepared
8 by Ying Poon, Dr. Michael Johns, or Robert Collacott to SDG&E, nor is it clear whether such reports
9 even exist. (Tracy Declaration, ¶ 13.)

10 At this crucial point of the proceedings, much is at stake for all the parties. Since the Regional
11 Board will ostensibly be basing its liability determinations under the TCAO based on evidence in the
12 administrative record, it is vital that the record consist of proper evidence that comply with the rules
13 applicable to this proceeding, and other applicable statutory and regulatory safeguards intended to
14 prevent or minimize prejudice. In light of the Port's tactics, SDG&E has no means to compel discov-
15 ery of additional expert information from the Port that would be necessary to adequately analyze or
16 rebut the conclusions contained in the Declarations prior to the hearing in this matter. (Tracy Declara-
17 tion, ¶ 14.)

18 As a result, while SDG&E and other parties arguably had until June 23, 2011 to seek to rebut
19 the "opinions" offered by the Port's experts, the failure to produce sufficient writings or reports detail-
20 ing the basis for each expert's opinions (as generally set forth in the Declarations) has rendered such
21 efforts futile. The result is substantial prejudice to SDG&E and other parties that abided by the
22 procedural requirements of the Discovery Plan.

23 Therefore, the Johns Declaration, the Poon Declaration, and the Collacott Declaration, as well
24 as any and all evidence, briefing, or testimony that relies in whole or in part upon any or all of these
25 Declarations, must be excluded from the record.

1 **III. LEGAL ARGUMENT**

2 A. Expert Witnesses Are Required To Produce Reports And Writings

3 1. The Port Failed to Comply with the Discovery Order Deadline for Production
4 of Any Expert Reports

5 The Discovery Order expressly instructs all Designated Parties in this proceeding, including
6 the Port, that the provision of written testimony and associated exhibits must be accomplished in
7 accordance not only with the requirements of Regional Board regulations and the Code of Civil
8 Procedure, but also in accordance with the schedule set forth therein. (Tracy Declaration, ¶¶ 4, 10.)
9 Section II of the Discovery Plan, incorporated into the Discovery Order, and entitled *Preservation of*
10 *Procedural and Due Process Rights*, provides that the “submission of expert evidence must adhere to
11 [the] discovery schedule to preserve all parties’ procedural and due process rights.” (Tracy Declara-
12 tion ¶ 10.) Further, the Discovery Order established deadlines for the designation of experts and the
13 exchange of expert witness information, including expert reports. The Discovery Order further desig-
14 nated March 11, 2011 as the last day for Designated Parties, including the Port, to submit expert
15 reports. (Tracy Declaration, ¶¶ 4, 7.)

16 The Port blatantly ignored this deadline and, on this basis alone, its expert Declarations should
17 be deemed untimely, improperly submitted and stricken from the record.

18 2. The California Code of Civil Procedure Requires Timely Exchange of Expert
19 Reports

20 Pursuant to Section I of the Discovery Plan, procedures for expert witness disclosures in the
21 instant proceeding are governed by applicable CCP provisions. (Tracy Declaration, ¶ 15.) CCP
22 sections 2034.010 *et seq.* set forth the regulations governing the exchange of expert information.
23 Section 2034.270 states:

24 If a demand for an exchange of information concerning expert trial witnesses
25 includes a demand for production of reports and writings as described in subdivi-
26 sion (c) of Section 2034.210, all parties shall produce and exchange, at the place
27 and on the date specified in the demand, all discoverable reports and writings, if
28 any, made by any designated expert described in subdivision (b) of Section
2034.210.

1 The purpose of discovery is “to assist the parties and the trier of fact in ascertaining the truth;
2 to encourage settlement by educating the parties as to the strengths of their claims and defenses; to
3 expedite and facilitate preparation for trial [hearing]; to prevent delay; and to safeguard against
4 surprise.” (*Boston, supra*, 170 Cal.App.4th at 950 (citing *Beverly Hospital v. Superior Court* (1993)
5 19 Cal.App.4th 1289, 1294).) The disclosure of expert witnesses and the facts and opinions underlying
6 the substance of their testimony are critical to facilitating a fair hearing. As the Supreme Court
7 recognized in *Bonds v. Roy* (1999) 20 Cal.4th 140:

8 *Indeed, the very purpose of the expert witness discovery statute is to give fair*
9 *notice of what an expert will say at trial ... “[T]he need for pretrial discovery is*
10 *greater with respect to expert witnesses than it is for ordinary fact witnesses*
11 *[because]...the other parties must prepare to cope with witnesses possessed of*
12 *specialized knowledge in some scientific or technical field. They must gear up to*
cross-examine them effectively, and they must marshal the evidence to rebut their
opinions.”

13 (*Id.*, at pp. 146-147, citations omitted, emphasis added (court precluded the defendant’s expert witness
14 from testifying on a subject that was not previously identified in the expert witness’ declaration).)

15 It is well-established that a fundamental purpose of expert disclosure and discovery is to pre-
16 vent unfair surprise (typically, at trial). (*Province v. Center for Women’s Health & Family Birth*
17 (1993) 20 Cal.App.4th 1673, 1683-1684; *City of Fresno v. Harrisen* (1984) 154 Cal.App.3d 296, 301.)
18 It “allows the parties to assess whether to take the expert’s deposition, to fully explore the relevant
19 subject area at any such deposition, and to select an expert who can respond with a competing opinion
20 on that subject area.” (*Boston, supra*, 170 Cal.App. 4th at 951.)

21 Furthermore, CCP section 2034.300 permits exclusion of expert opinion where a party has
22 unreasonably failed to produce reports and writings relied upon by that that expert witness pursuant to
23 section 2034.270. (Code Civ. Proc. § 2034.300(c); *Boston v. Penny Lane Ctrs.* (2009) 170 Cal.App.4th
24 936, 952 (failure to timely exchange expert report grounds for excluding expert testimony at trial).)
25 Exclusion of an expert’s opinion is warranted where necessary to prevent or respond to abuse of expert
26 witness discovery procedures. (*Penny, supra*, at 952.) Specifically, where a party intentionally
27 manipulates the discovery process, provides expert witness information that is late or incomplete, or

1 where the moving party has no reasonable means to remedy such failures prior to hearing, exclusion of
2 expert opinions is justified. (*Id.* at 952-53; *Zellerino v. Brown* (1991) 235 Cal.App.3d 1097.)

3 Based on the foregoing, the Regional Board is well within its discretion to exclude the expert
4 Declarations submitted by the Port and any reference thereto in the Port's comments.

5 3. Regional Board Regulations Require Submittal of Expert Information In
6 Accordance With Established Deadlines and Discourage Unfair Surprise

7 Pursuant to Regional Board regulations governing adjudicative proceedings, "[i]t is the policy
8 of the State and Regional Boards to discourage the introduction of surprise testimony and exhibits."
9 (23 C.C.R. §648.4(a).) In furtherance of that policy, applicable regulations provide for the exclusion
10 of testimony and evidence where a provision of 23 C.C.R. § 684.4 is violated and there is a showing of
11 prejudice to any party or the Regional Board. (*Id.*) Regional Board regulations governing discovery
12 and evidentiary requirements are referenced in the Discovery Plan and Discovery Order. (*See Tracy*
13 *Declaration*, ¶ 15.)

14 Consistent with California rules of civil procedure, 23 CCR section 648(b) requires that all
15 parties intending to present evidence submit information, including but not limited to: the name of any
16 witness who the party intends to call at hearing; the subject of any witnesses' testimony; and the
17 qualifications of each expert witness within a time period specified by the Regional Board. (23 C.C.R.
18 §648.4(b).) Section 648.4(c) requires that not only written testimony, but also copies of exhibits
19 (which would encompass any reports or writings) relied upon in generating any testimony, be submit-
20 ted to the Regional Board and to other parties to the proceeding "in accordance with provisions of the
21 hearing notice or other written instructions provided by the Board." (23 C.C.R. § 648.4(c).)

22 The Port failed to produce copies of reports or writings prepared by its three experts identified
23 in the Expert Designation. Moreover, the Port has provided no explanation for failing to do so. Based
24 on the circumstances, it can be fairly surmised the Port's strategy was an intentional manipulation of
25 the discovery process, intended to thwart the ability of SDG&E and other Designated Parties to
26 meaningfully respond to its experts' assertions. Simply stated, there is no readily apparent reason why
27

1 the Port failed to timely submit expert reports on or before the March 11, 2011 deadline, and neither
2 its Comments nor the Declarations address this failure.

3 Furthermore, the Declarations provide an inadequate foundation for the opinions contained
4 therein and cited in the Comments. Not one of the Declarations provides any detailed factual or tech-
5 nical basis for the opinions provided and conclusions reached therein. Even assuming, for the sake of
6 argument, that expert reports or writings more detailed than the Declarations could not reasonably
7 have been prepared in advance of the March 11, 2011 deadline for submitting such reports, certainly
8 they could have been prepared by May 26, 2011, the date on which the Comments was submitted.
9 Again, since the Port has not provided any reasonable explanation for the failure to provide more
10 meaningful and substantiated analysis, SDG&E can only surmise that the Port's refusal to provide the
11 requisite information was an intentional effort to withhold information from the parties. This, of
12 course, constitutes an abuse of the discovery process all parties, including (eventually) the Port,
13 specifically agreed to after weeks of negotiations.

14 Once again, based on the Port's failure to comply with requirements of the Discovery Order
15 and 23 Section 648.4, the Declarations, together with any testimony, evidence, or briefing that pur-
16 ports to rely upon them, should be stricken from the record to prevent prejudice to SDG&E and other
17 Designated Parties.

18 B. The Declarations And Associated Statements And Testimony Must Be Excluded To
19 Prevent Prejudice

20 The Port failed to submit any expert reports by March 11, 2011. Now, almost three months
21 after the close of the relevant discovery deadline, the Port has submitted its Comments, which relies
22 heavily on the opinions of Port experts, for whom no reports or writings beyond the Declarations were
23 ever submitted. Importantly, no other party to this proceeding, SDG&E included, could reasonably
24 have addressed the purported opinions of the Port's experts in its briefing because the Port failed to
25 provide the required expert reports by the deadline mandated in the Discovery Order.

26 Suffice to say, it appears the Declarations are offered in lieu of expert reports and as a means of
27 circumventing the requirement to submit expert reports. Given the magnitude of the issues at stake in
28

1 this proceeding, and the complexity of the issues about which each of the experts has been called upon
2 to opine, it is nothing short of remarkable that not one of the Port's three designated experts generated
3 a formal report that properly explains and supports the opinion to be proffered by each witness.

4 Clearly, to do so is customary, and in virtually any proceeding involving expert testimony an expert
5 would reasonably be expected to prepare an expert report. Indeed, every other party provided more
6 meaningful expert reports and writings for each expert designated to provide testimony in this matter.

7 The Port's failure to provide the level of documentation expected in this type of proceeding is
8 particularly manipulative and unreasonable in this instance, given the Designated Parties' decision to
9 forego expert witness depositions and resultant reliance upon the written reports provided by expert
10 witnesses in this proceeding. Thus, assuming the Declarations are intended to fulfill the purpose of
11 expert reports, allowing the Port to circumvent the expert report and writing requirement by submitting
12 the Declarations violates Regional Board regulations, the CCP, and the Discovery Plan because no
13 other Designated Party in this proceeding had the opportunity to review the Declarations in advance of
14 submitting its own brief regarding the primary liability issues to be addressed by the Regional Board
15 in connection with the TCAO and DTR. More importantly, it severely prejudices SDG&E and the
16 other Designated Parties, since the Port was afforded the opportunity to review and analyze the exten-
17 sive expert reports and writings submitted by the other Designated Parties in preparation for drafting
18 the Comments, while the other Designated Parties were not given any such opportunity with regard to
19 the Port's experts.

20 SDG&E and other Designated Parties continue to be prejudiced by the Port's disregard for the
21 discovery process insofar as they remain unable to review and analyze information or documentation
22 providing the foundation for the Declarations during the remainder of the rebuttal period, and in
23 preparation for the hearing in this proceeding. Moreover, SDG&E and the other Designated Parties
24 are left without a remedy, because there is no further opportunity to depose the Port's experts or
25 otherwise compel disclosure of more meaningful information in advance of the hearing.

26 ///

27 ///

1 The Port cannot be allowed to ignore and/or circumvent applicable requirements and discovery
2 deadlines to the detriment of the compliant parties given the extreme prejudice to SDG&E and the
3 other parties to this proceeding resulting from this behavior.

4 **IV. CONCLUSION**

5 To allow the Port's Declarations and any statement or testimony that relies upon the same into
6 evidence contradicts Regional Board regulations, black-letter law, and the Discovery Order. Further,
7 allowing the Port to rely upon the Declarations is fundamentally unfair, and violates every other
8 party's right to due process in these proceedings. Accordingly, SDG&E respectfully requests that the
9 expert declarations of Dr. Michael Johns, Ying Poon, and Robert Collacott, along with any statement
10 or testimony premised upon the same, be stricken from the record.

11
12 Dated: June 23, 2011

OFFICE OF THE GENERAL COUNSEL

13
14 By:  _____

Jill A. Tracy

Attorneys for Designated Party,
SAN DIEGO GAS & ELECTRIC COMPANY

1 OFFICE OF THE GENERAL COUNSEL
2 JILL A. TRACY (State Bar No. 182136)
3 101 Ash Street, 12th Floor
4 San Diego, CA 92101
5 Telephone: (619) 699-5112
6 Facsimile: (619) 696-4488
7 jtracy@semprautilities.com

8 WARD L. BENSHOOF (State Bar No. 054987)
9 PETER A. NYQUIST (State Bar No. 180953)
10 CATHERINE M. WIEMAN (State Bar No. 222384)
11 MARISA E. BLACKSHIRE (State Bar No. 250156)
12 ALSTON & BIRD LLP
13 333 South Hope Street, Sixteenth Floor
14 Los Angeles, California 90071
15 Telephone: (213) 576-1000
16 Facsimile: (213) 576-1100

17 Attorneys for Designated Party
18 SAN DIEGO GAS & ELECTRIC COMPANY

19 CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
20 SAN DIEGO REGION

21 IN THE MATTER OF:
22
23 TENTATIVE CLEANUP AND
24 ABATEMENT ORDER NO. R9-2011-0001
25 (formerly No. R9-2010-0002)

26 **DECLARATION OF JILL A. TRACY IN
27 SUPPORT OF SAN DIEGO GAS &
28 ELECTRIC COMPANY'S MOTION IN
LIMINE TO EXCLUDE SAN DIEGO
UNIFIED PORT DISTRICT'S EXPERT
DECLARATIONS**

1 DECLARATION OF JILL A. TRACY

2 I, Jill A. Tracy, hereby declare as follows:

3 1. I am Senior Counsel for Designated Party San Diego Gas & Electric Company
4 ("SDG&E"). I respectfully submit this declaration in support of San Diego Gas & Electric Com-
5 pany's Motion In Limine to Exclude San Diego Unified Port District's Expert Declarations (the
6 "Motion"). If called upon as a witness, I could and would testify competently hereto.

7 2. On September 15, 2010, the San Diego Water Board Cleanup Team released a
8 revised Tentative Cleanup and Abatement Order No. R9-2011-001 ("TCAO") and supporting draft
9 technical report ("DTR").

10 3. The San Diego Unified Port District's ("Port") "Motion to Re-open and Extend
11 Discovery Deadlines in the matter of the TCAO/DTR" was filed on or about October 19, 2010.

12 4. The "Order Reopening Discovery Period, Establishing Discovery Schedule, and
13 Identifying Star and Crescent Boat Company as a Designated Party for Purposes of Cleanup and
14 Abatement Order No. R9-2011-0001" ("Discovery Order") was issued to the Designated Parties in
15 the Shipyard Sediment Site proceeding by Grant Destache, Acting Chair and Presiding Officer for
16 Prehearing Proceedings, on or about October 27, 2010.

17 5. In connection with discovery in this proceeding, SDG&E, together with other Desig-
18 nated Parties, made the decision to forego expert depositions as a means to expediting discovery in
19 this proceeding. The Designated Parties agreed that the exchange of expert writings and reports
20 would be the means of obtaining the expert opinions and testimony from each respective party, rele-
21 vant to the issues of liability and cleanup levels in connection with adoption of the Tentative
22 Cleanup and Abatement Order ("TCAO") and Draft Technical Report ("DTR").

23 6. The Port served its "Designation of Expert and Non-Expert Witnesses" on January
24 18, 2011. The Port designated Ying Poon, D.Sc, Dr. Michael Johns, and Robert Collacott as experts
25 in this proceeding.

26 7. SDG&E and each of the other Designated Parties, with the exception of the Port, sub-
27 mitted expert reports and writings on or before March 11, 2011, the discovery cut-off established in
28

1 the Discovery Order. The Port did not make any such submission.

2 8. On May 26, 2011, the Port served its "Submission of Comments, Evidence and Legal
3 Argument" ("Comments"), along with nineteen (19) exhibits thereto.

4 9. Among the 19 exhibits submitted by the Port were: Declaration of Expert D. Michael
5 Johns, PhD, in Support of the San Diego Unified Port District's Submission of Comments, Evidence
6 and Legal Argument ("Johns Declaration"); Declaration of Expert Ying Poon, D. Sc, P.E. in Support
7 of the San Diego Unified Port District's Submission of Comments, Evidence and Legal Argument
8 ("Poon Declaration"); and Declaration of Robert Collacott in Support of the San Diego Unified Port
9 District's Submission of Comments, Evidence and Legal Argument (individually, the "Collacott
10 Declaration,"). Together, the Johns Declaration, Poon Declaration, and Collacott Declaration are
11 referred to as the "Declarations." The Declarations provide unsupported, conclusory opinions that
12 are largely unsubstantiated and devoid of specific facts and evidence regarding the alleged source of
13 contaminants at the Shipyard Site, remedial drivers and related liability considerations.

14 10. The Discovery Order states that submissions of written testimony and associated
15 exhibits by Designated parties must comply with the requirements of Regional Board regulations
16 and the Code of Civil Procedure. Section II of the Discovery Plan, incorporated into the Discovery
17 Order, states that the submission of expert evidence must adhere to the discovery schedule set forth
18 *therein to preserve procedural and due process rights of the parties.*

19 11. Between March 11, 2011 and May 26, 2011, the date the Port filed its Brief and
20 accompanying expert declarations, the Port District did not contact SDG&E regarding its failure to
21 submit expert reports.


22 12. SDG&E is not aware of any communications between the Port and any other party to
23 this proceeding regarding reports prepared by or opinions provided by the Port's expert witnesses.

24 13. To date, the Port has not provided copies of any expert report prepared by Ying Poon,
25 Dr. Michael Johns, or Robert Collacott to SDG&E.

26 ///

27 ///



A  Sempra Energy® utility

Jill A. Tracy
Senior Counsel
101 Ash Street, HQ12-D
San Diego, CA 92101-3017

Tel: (619) 699-5112
Fax: (619) 696-4488

VIA EMAIL AND PERSONAL DELIVERY

June 23, 2011

Mr. Frank Melbourn
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4353

**Re: San Diego Gas & Electric Company's Reply Comments, Rebuttal Evidence and
Rebuttal Legal Argument
TCAO R9-2011-0001**

Dear Mr. Melbourn:

This letter is respectfully submitted on behalf of San Diego Gas & Electric Company ("SDG&E") as Reply Comments, Rebuttal Evidence and Rebuttal Legal Argument to the San Diego Unified Port District's ("Port District") Submission of Comments, Evidence and Legal Argument dated May 26, 2011 regarding the San Diego Regional Water Quality Control Board's "Responsible Party" Designation of the SDUPD under TCAO R9-2011-0001, Water Code Section 13304, and related authorities.

I. INTRODUCTION AND SUMMARY OF COMMENTS

On September 15, 2010, the San Diego Water Board Cleanup Team released a revised TCAO R9-2011-0001 ("TCAO") and supporting draft technical report ("DTR"). The revised TCAO/DTR changed the prior TCAO and DTR in a number of material respects, and notably identifies the Port as a primary discharger as a result of its status as a "trustee" for the acts, omissions and operations of its tenants, and the Port District's ownership and operation of the MS4 system that discharged waste into the San Diego Bay.

On May 26, 2011, rather than embrace the environmental stewardship its' role of the tidelands trustee for the Shipyard Sediment Site, the Port District submitted Comments, Evidence and Legal Argument in a desultory and perfunctory attempt to shirk liability for its past transgressions. In so doing, it appears that the Port District has missed the boat. Rather than acknowledge its responsibility as an owner and trustee of the Shipyard Sediment Site during decades of

illicit discharges of pollutants by its historical shipyard tenants, many of which are now defunct, the Port District attempts to avoid its own liability by foisting responsibility for historical discharges upon others because they have the financial resources, in particular, insurance coverage, to perform the cleanup of the Shipyard Sediment Site. Unfortunately for the Port District, the law and the facts specific to this matter demand a different conclusion.

The overwhelming and indisputable evidence shows that the most egregious contamination of the Shipyard Sediment Site occurred during the Port District's ownership period from 1962 to approximately 2005, when the NASSCO and BAE Shipyards successfully implemented storm-water control systems and best management practices to eliminate illicit discharges to the Bay. While the Port District accepted tens of millions of dollars of rental payments from the shipyards¹, it stood by for decades and allowed countless harm and beneficial use impairment to occur without a single effort to protect the Bay. This conduct should not be condoned by the Regional Board.

The Shipyard Sediment Site has operated as a shipyard and related industrial operations that discharged waste into the San Diego Bay for almost one hundred (100) years. For approximately half of those 100 years, the Port District owned the Shipyard Sediment Site and leased it for decades to a variety of now-defunct shipyard and industrial tenants. Despite being subject to administrative proceedings before the Regional Water Quality Control Board – San Diego Region ("Regional Board") since the early 1990s, not one single shipyard tenant for the 1963-1972 time frame has made an appearance or is otherwise participating in the administrative proceedings before the Regional Board.

The Port District has cited to its status as a "trustee" of the shipyards tidelands as the basis for its position that it is not a properly named discharger under TCAO R9-2011-0001 and the full liability for historical discharges should fall upon the parties actually participating in the Regional Board proceedings. In so doing, the Port District engages in legal gymnastics, ignores well-established legal and policy issues and threatens to undermine the substantial progress the participating dischargers have made over the past several years to bring this cleanup project to fruition. The Regional Board should not make the same error in judgment.

¹See, Port District's Amended Responses to SDG&E's Special Interrogatories dated April 7, 2011.

II. THE PORT DISTRICT IS PROPERLY NAMED AS DISCHARGER TO THE SHIPYARD SEDIMENT SITE

A. The Creation of the San Diego Unified Port District and Title to Tidelands

On May 1, 1911, by an Act of the State Legislature, all lands bordering and extending into San Diego Bay were conveyed to the City of San Diego by the State of California, in furtherance of navigation, commerce and fisheries. The original San Diego City Charter (1931), Section 54(b) created the San Diego Harbor Commission. That section gives the Harbor Commission, "jurisdiction, supervision, management and control of the Bay of San Diego." By the 1950s, the Harbor Department evolved into the Port of San Diego and, by an act of the State Legislature in 1962, the San Diego Unified Port District (Port District) was formed.

Courts have interpreted that a grant of property to a public entity for public purpose creates a fee simple absolute. (See, *More v. E. A. Robey & Co.*, 214 Cal. App. 2d 464; *Washington Boulevard Beach Co. v. Los Angeles*, 38 Cal. App. 2d 135; and *Emeryville v. Elementis*, (2001) 52 ERC (BNA) 1648, 16) As a public trustee, the Port District retains the greatest control over the Shipyard Sediment Site – the ability to enter into and renew leases, the ability to re-enter the property, and ultimate responsibility for the management of the Bay. The State Board found the above listed "indicia of ownership" sufficient to hold the SDUPD primarily liable in California State Water Resources Control Board ("State Board") Order No. WQ89-12, dated August 17, 1989. In that case, the State Board found that the lessee had fallen behind on their cleanup requirements from a previous version of the CAO and the Port District had control over the lessee because it could have terminated the lease at any time and retained the right to enter the property to determine compliance with the lease. The same result is warranted here, where now-defunct tenants of the Port District are not, and cannot contribute to the proposed cleanup of the Shipyard Sediment Site.

B. The Port District, As The Shipyard Tidelands Trustee, Is Governed By The Public Trust Doctrine And Has A Greater Duty Of Care Than A Mere Owner Of Property

The public trust doctrine, providing that certain natural resources be held by the state in special status, creates an affirmative ongoing duty to safeguard the long-term preservation of those resources for the benefit of the general public. (*Matthew Bender, California Environmental Law and Land Use Practice* § 2.08, citing *National Audubon Society v. Superior Court* (1983) 33 Cal. 3d 419, 433-441, cert. denied, 464 U.S. 977 (1983)) The most traditional application of the public trust doctrine has been to tidal and submerged lands. Along with tidelands, fish and wildlife are the beneficial uses most traditionally associated with the public trust doctrine. (*Geer v. Connecticut* (1896) 161 U.S. 519; *Hughes v. Oklahoma* (1979) 441 U.S. 322; *Ex parte Maier* (1894) 103 Cal. 476, 483; *People v. Truckee Lumber Co.* (1897) 116 Cal. 397, 399-401; *Center for Biological Diversity, Inc. v. FPL Group, Inc.* (2008) 166 Cal. App. 4th 1349, 1370-1371; *Bohn v.*

Albertson (1951) 107 Cal. App. 2d 738, 753-756; Betchart v. Department of Fish & Game (1984) 158 Cal. App. 3d 1104, 1106; see also Fish & Game Code § 1801(f)

The responsibility to uphold the public trust doctrine, and thereby, protect water quality, fish and wildlife at the Shipyard Sediment Site, falls onto the shoulders of the Port District. Numerous courts have held that the failure of a public trustee to protect the natural resources from pollution is a violation of that duty. (*Kelly v. 1250 Oceanside Partners, et al.* (2006) 111 Haw. 205, 217) (citing Findings of Fact from underlying case where plaintiff alleged that County violated its public trust duties with respect to water pollution that occurred in waters abutting the property); *Environmental Advocates v. San Diego Unified Port Dist.*, USDC Southern District, Case No. 97-cv-1066-BTM) California case law explicitly identifies the state's "affirmative duty to take the public trust into account in the planning and allocation" of trust resources, and further calls on government agencies to avoid "unnecessary and unjustified harm to trust interests" as well as "to preserve, so far as consistent with the public interest, the uses protected by the trust." (*National Audubon Society v. Superior Court* (1983) 33 Cal. 3d 419, 446-447)

C. The Port District's Management of the Tidelands is Governed by Numerous Additional Authorities Requiring It to Protect the Bay from Pollution

The management of San Diego harbor and tidelands designated to the Port District by the State Lands Commission is governed by the San Diego Unified Port District Act (*Cal Harb. & Nav. Code, Appx. 1 (2010)*). The Port Act, originally enacted in 1962, provides in relevant part as follows:

- "The title to [tidelands] shall reside in the district, and the district shall hold such lands in trust for the uses and purposes and upon the conditions which are declared in this act." (Port Act § 14)
- The Port District was established for "the development, operation, maintenance, control, regulation, and management of the harbor of San Diego upon the tidelands and lands lying under the inland navigable waters of San Diego Bay." (Port Act § 4)
- The Port District shall exercise its land management authority and powers over tidelands and any other lands conveyed to it. (Port Act § 5)
- The Port District shall hold tidelands in trust for purposes in which there is a general statewide purpose, including establishment, improvement and conduct of harbor and incidental buildings and facilities. (Port Act § 87)

The Port Master Plan, originally adopted in 1964, embodies planning policies for harbor and port improvement and for the use of all of the tidelands entrusted to the Port District (SDUPD Port Master Plan (2010)). Pursuant to the Port Master Plan, the Port District is obligated to:

- "administer the tidelands so as to provide the greatest economic, social, and aesthetic benefits to present and future generations." (Port Master Plan, § II Planning Goals, p. 8)

- “establish guidelines and standards facilitation the retention and development of an esthetically pleasing tideland environment free of noxious odors, excessive noise, and hazards to the health and welfare of the People of California.” (Port Master Plan, § II Planning Goals, p. 9)
- “insure, through lease agreements that Port District tenants do not contribute to water pollution.” (*Id.*)
- “cooperate with RWQCB, DEH and other public agencies in a continual program of monitoring water quality and identifying source of any pollutant.” (*Id.*)
- “adopt ordinances, and take other legal and remedial action to eliminate sources of pollution.” (*Id.*)
- “administer the natural resources so that impacts upon natural resource values remain compatible with the preservation requirements of the public trust.” (Port Master Plan, § II Planning Goals, p. 10)
- “curb the misuse of land so that it will not injuriously affect the people of the State of California through the prevention of substandard construction or unnecessarily add inappropriate developments.” (*Id.*)
- “prevent the abuse of land by curtailing abortive development and unfounded pollution contributors.” (*Id.*)

The San Diego Port District Code and related ordinances provide additional requirements, protocols and procedures used by the Port District in managing public trust tidelands, including:

- regulation of rubbish and waste disposal, stating it is unlawful to “dump any material or throw garbage, offal, rubbish, letter, sewage or refuse of any kind into Port’s tidelands” without written permission from Executive Director. (Port Code § 8.50)
- Stormwater Management and Discharge Control requirements to ensure compliance with State stormwater regulations by Port District and users of tidelands, which prohibit polluted non-stormwater discharges to conveyance systems, establishes requirements for stormwater management to prevent and reduce pollution, and to use management practices by Port’s tenants/subtenants that will reduce the adverse affects of polluted runoff discharges on waters of the State. (Port Code Article 10)
- authority to inspect activities and facilities to carry out purposes of any applicable statute, rule, code or regulation enforceable by Port District. (Port Code, Article 10, § 10.10)
- Ordinance No. 62, "An Ordinance Regulating Disposal of Refuse and Dumping on the Tidelands And Into the Bay of San Diego" - making it unlawful to dump any kind of refuse (including chemicals or industrial waste) into the Bay without the written permission of the Port Director. (Port Ordinance No. 62, May 9, 1963, p. 1, amended in 2005)

The public trust doctrine and the numerous laws and ordinances governing the Port District’s oversight of the Shipyard Sediment Site creates a responsibility to protect the Bay, and prohibit by action, not merely words, shipyard/industrial operations which degrade water quality, fish and wildlife beneficial uses of the Shipyard Sediment Site, and thus harm the public purposes of the

trust and ensure that harm does not occur. Therefore, any knowledge of activities or operations on the part of the Port District triggers a duty to act to preserve the public trust. The critical question regarding ownership is whether or not the entity had a significant ownership interest at the time of discharge, making that owner ultimately responsible for operations conducted on their property. See, factors listed in State Board WQO 86-15 (*Stuart Petroleum*). The Port District clearly possessed a significant ownership interest during decades of significant discharges by its historical shipyard tenants, resulting in beneficial use impairment. The Port District does not point to a single act of enforcement in furtherance of its environmental responsibility to protect the Bay, nor to a single historical shipyard tenant during the 1963-1972 time frame participating in these proceedings. The law and facts of this matter compel only one result, that the Regional Board reject the Port District's request that it not be named as a discharger.

III. NON-OPERATING LANDOWNERS MAY BE DESIGNATED AS "DISCHARGERS" UNDER WATER CODE SECTION 13304

A. Landowners May Be Primarily Liable Under Section 13304

Water Code section 13304 confers authority to the Regional Board to issue a CAO to any person who has discharged, or who has caused or permitted a discharge of, waste into the waters of the state where such discharge "creates, or threatens to create, a condition of pollution or nuisance." Water Code § 13304. While no published judicial decision has directly addressed the issue,² a long line of State Board decisions has held that a landowner can be held responsible as a "discharger" under section 13304 for discharges that occur on its property, notwithstanding direct responsibility for waste discharges by tenants or lessees.³ Indeed, the Port District has previously acknowledged this point. (See July 15, 2004 letter from the Port District to John H. Robertus, p. 10.)

This general rule extends to circumstances where "the landowner did not take an active role in the discharge but . . . was in a position to prevent the discharge and knew or should have known

² See, e.g., *Cf., City of Modesto Redevelopment Agency v. Superior Court*, 119 Cal.App.4th 28 (manufacturers and distributors who took affirmative steps to dispose of solvent wastes liable under section 13304 for improper discharges).

³ See, e.g., *In re Southern California Edison*, WQO 86-11 (owner properly named as discharger); *In re Stuart Petroleum*, WQP 86-15 (owner of property did not cause discharge under Water Code section 13304, but permitted it because he had legal power to stop the contamination); *In re Vallco Park* WQP 86-18 ("ultimate responsibility for the condition of the land is with its Owner"); *In re United States Dept. of Agriculture, Forest Service*, WQO 87-5 ("Board has consistently taken the position that a landowner who has some ability to control what takes place on his or her land can be held accountable for discharges which occur on the property"); *In re Spitzer*, WQO 89-8 (landowners who know of discharge on their property and have sufficient control of the property to correct it are subject to a cleanup order). Longstanding state policy provides that a person who owns land on which a discharge has occurred is a "discharger" under the Porter-Cologne Act. (See Memorandum from William R. Attwater, Chief Counsel of the State Board, to Regional Board Executive officers (May 8, 1987), 26 Ops. Cal. Atty.Gen. 88; see also Opinion No. 55-116 (Aug. 30, 1955).)

“[w]hile the user/discharger bears primary responsibility for compliance with the Regional Board orders, the landowner must assume ultimate responsibility. These recent orders are consistent with longstanding interpretations as to who is a discharger under the Porter-Cologne Water Quality Act and its predecessors.” *In re Schmidl*, WQO 89-1 at 5-6, citing *In re Southern California Edison*, WQO 86-11 and *In re United States Dept. Of Agriculture, Forest Service*, WQO No. 87-5. In *Schmidl*, the State Board held that a landowner had ultimate responsibility for a cleanup even though he acquired the property after a previous owner had discharged pesticides to the land.

The revised Draft Technical Report correctly names the Port District “in its capacity as the State’s trustee as a discharger in the Shipyard Sediment Site CAO...consistent with its responsibility for the actions, omissions and operations of its tenants and to the extent indicated by previous State Water Board and San Diego Water Board Orders.” DTR at 11-2.

i. Prior State Board Decisions Have Held the Port District Liable as a “Landowner” and Discharger Under Section 13304

The Revised DTR cites to the extensive authority under both waste discharge requirements and enforcement orders, as well as memoranda issued by the State Board Office of Chief Counsel in support of the San Diego Water Board’s decision to name the Port District as a primary discharger. (Revised DTR, 11-2, footnote 102). As previously discussed, there are two separate State Board decisions involving the Port District that squarely address these issues. First, *In re San Diego Unified Port District*, SQO 89-12, involved responsibility for waste discharge requirements and cleanup obligations as between the Port District and its former tenant, Paco Terminals, Inc. (“Paco”). In 1985, after a compliance inspection identified copper discharges into San Diego Bay, the Regional Board issued a CAO naming Paco as the responsible party. Paco ceased operations in 1986 and terminated its lease with the Port District in January 1988. In February 1989, the Regional Board amended the CAO to add the Port District as a responsible party.

In a petition to the State Board, the Port District contended it was improper to name it as a party to the TCAO because its involvement was “entirely passive.” In addressing this issue, the State Board focused on whether the Port District “caused or permitted” copper to be discharged to the San Diego Bay, and concluded there was “no question that the Port District permitted the discharges to occur.” (*Id.* at 6) Perhaps more significantly, the State Board noted it was “undisputed” that the Port District “owned” the property leased by Paco, and further held the “Port District also owns a portion of the tidelands and submerged lands underlying the inland navigable waters of San Diego Bay adjacent to [the leased property].” *Id.* at 7, citing *San Diego Unified Port District Act*, Cal. Harbors & Nav. Code, §§ 5, 14)

Second, *In re San Diego Unified Port District*, WQO 90-3, addressed waste discharge requirements (“WDRs”) issued to six boatyards and shipyards operating on property “owned by the Port District.”(*Id.* at 2) The permits imposed an extensive program on each of the dischargers to monitor Bay sediment, and added the Port District as a responsible party for all obligations

under the Permits. The Port District petitioned to the State Board, requesting that it be removed as a responsible party, or alternatively, only be named secondarily liable.

The State Board concluded that because "neither the federal or state law or regulations specify who must be named in a permit," it was within the Regional Board's discretion to name a "non-operating landowner in the waste discharge requirements/NPDES permits." (*Id.* at 3) While the decision focused on whether the Port District was properly named as a discharger under NPDES criteria, the State Board concluded the "same analysis applied to cleanup and abatement orders also applies to waste discharge requirements," even though the statutory language defining "discharges" is different:

Where the landowner has knowledge of the activity and has the ability to control the activity, it is reasonable to conclude that such landowner is a discharger. [citing Attwater Memo., May 8, 1987.] The discharge could not occur without the landowner allowing the tenant to operate the activity on the land. In addition, the source of the discharge is the land and activities on the land. In this case, the Port District owns the land on which all permitted facilities operate. The Port District knows of the potential for discharges of waste from the facilities and has the ability under lease provisions to control activities on the leased premises . . . Since the source of the discharge is the land owned by the Port District, it is a discharger under the Water Code. *Id.* (emphasis added)

B. Prior State Board Decisions Have Held Government Agencies Liable Under Section 13304

The Regional Board recognizes that it is "appropriate to name government agencies as responsible parties." (Revised Drat Technical Report, at 1-7, citing WQOs 88-2, 89-12 and 90-3). In *In Re County of San Diego, City of National City, et al.*, WQO 96-2, the State Board held that the fact that public agencies were included among named dischargers under a CAO did not alter their legal obligations. The decision involved WDRs and a CAO issued by the San Diego Regional Board to address water quality problems at the Duck Pond Landfill. The land was currently owned by a private interest but had previously been owned by the city. The State Board broadly construed the scope of liability under section 13304 in clean up situations, observing that it is "broader in scope in its coverage" relative to WDR provisions. It applies to discharges that are past discharges, and clearly applied to uncontrolled, intentional, or negligent releases." (*Id.* at 10)

Notably, the State Board refuted the County of San Diego's contention, that pre-1981 conduct could not give rise to liability, pursuant to Water Code section 13304(f).⁴ Additionally, the State

⁴ "Water Code Section 13304 authorizes the Regional Water Board to mandate cleanup by both past and present dischargers. Dischargers who stopped discharging prior to January 1, 1981 are liable under Section 13304 if their acts were in violation of existing laws or regulations at the time they were discharging." (*In re Alco*, WQO 93-9, citing Wat. Code § 13304(f)) Since 1872, CA law has prohibited the creation or continuation of a public nuisance. (Civ. Code § 3490.) Since 1949, CA law has prohibited the discharge or waste in any manner that will result in pol-

Board disagreed with the city's assertion that it should not be named as a discharger in the CAO because, at most, it had been an easement holder for public right of way adjacent to the landfill. In making this finding, the State Board noted that while "the City's contribution to the effects of landfill discharges to the ground water in this regard may be relatively minor, it is apparent that the City's participation in the remediation effort will be necessary." (*Id.* at 14-15 (emphasis added))

This latter point reflects recognition by the State Board that, "generally speaking, it is appropriate and responsible for a Regional Board to name all parties for which there is reasonable evidence of responsibility, even in cases of disputed responsibility."⁵ This principle, grounded in equity, is even more important at sites involving substantial clean up costs where the inclusion of more parties is appropriate to defray potentially large costs.

In re US. Dept. Of Agriculture, WQO 87-5, also squarely addressed the question of whether it was proper to name a governmental entity which owns and manages the land on which a discharge occurs. In concluding that the Forest Service was properly named to applicable WDRs (which requirements are more restrictive than CAOs), the State Board affirmed the position that a landowner with some ability to control what takes place on his or her land can be held accountable for discharges which occur on the property. (*Id.* at 7)

C. The Port District Should Be Named as "Discharger" in Connection with Discharges by Former/Historic Shipyard Lessees

The existence of two precedential State Board decisions on point would typically carry substantial weight in evaluating how the State Board might consider these issues on a petition for review in the present context. There is no overriding basis to distinguish these prior decisions from present circumstances and, on the merits, the outcome should be the same. More significantly, since the foregoing decisions were issued, the Port District has gone to great lengths to challenge and refute the notion that it is a "land owner" or has ever "owned" any lands comprising the Shipyard Sediment Site, and to insulate itself from liability arising from historical tenant activities.

As summarized in the Port District's letter of July 15, 2004 to the Regional Board, following the decision in WQO 90-3, the Port District initiated efforts to file a writ challenging the order in superior court. Prior to filing suit, the Port District purportedly reached an agreement with the State Board and Regional Board as to specific language to be placed in its tenant's permits. Pursuant thereto, the Regional Board purportedly committed to take no enforcement action against the Port District for its lessees' violations "unless there is a continued failure to comply by les-

(Civ. Code § 3490.) Since 1949, CA law has prohibited the discharge or waste in any manner that will result in pollution, contamination, or nuisance. (Health & Safe. Code § 5411.) A successor property owner who fails to abate a continuing nuisance by a prior owner is liable in the same in manner as the prior owner. (*City of Turlock v. Bristow*, 103 Cal.App. 750 (1930).)

⁵ *In re Exxon Company*, WQO 85-7; see also *In re Stuart Petroleum*, WQO 86-16.

see after the [Port] has been given notice of the violations and opportunity to obtain compliance of the lessees." (*Id.* at 8, *citing* Order No. 97-36 NPDES Permit, No. CAGO39001)

Against this backdrop, any evaluation of whether the State Board or a court would determine that the Regional Board abused its discretion by not designating the Port District as a discharger likely turns on various legal and factual issues. A threshold legal issue is whether a meaningful distinction exists between the Port District's claimed status as a "trustee" of Shipyard Sediment Site versus ownership, notwithstanding the State Board's prior determinations that the Port District is an "owner" for purposes of liability under the Water Code. (*See* San Diego Unified Port District Act, Harb. & Nav. Cod., App. 1; WQP 89-12; WQO 90-3.)⁶ In this respect, "ownership" in the literal legal sense is not necessarily a prerequisite to a finding of discharger liability. (*See In re County of San Diego, City of National City*, WQO 96-2 (imposing discharger liability on City based on status as easement holder).) Moreover, the Port's status as a 'trustee' gives rise to numerous responsibilities well beyond those of a mere owner of the Shipyard Sediment Site. (See Section II(B), herein).

The larger unresolved issue, with respect to both the Port District as well as the named dischargers under the TCAO, is how responsibility should be assigned for activities and discharges attributable to any defunct Shipyard Sediment Site tenants. The rationale set forth herein is entirely consistent with the State Board's decision in *In re San Diego Unified Port District*, WQO 89-12. In other words, under the reasoning of that decision, to the extent prior tenants of the Port District of the Shipyard Sediment Site cannot or refuse to fulfill cleanup obligations resulting from historic discharges the Port District must continue to be named as a primary discharger. (*Id.* at 7)

IV. THE STATE AND REGIONAL BOARDS ARE PRECLUDED FROM APPORTIONING RESPONSIBILITY FOR REMEDIAL ACTIVITIES UNDER A CAO

While the CAO does not expressly seek to allocate or apportion responsibility for cleanup costs at the Shipyard Site, if the Regional Board grants the Port District's request, by excluding the Port District from any owner responsibility related to its historic tenant discharges the Regional Board will nonetheless become engaged in a *de facto* allocation of harm.

Once again, the State Board's decision in *In re San Diego Unified Port District*, WQO 89-12, seems particularly on point. Therein, the State Board concluded it was appropriate for the Regional Board to name the Port District primarily liable. In so doing, the State Board observed:

However, by upholding the Regional Board's decision, the State Board is not attempting to allocate responsibility between the parties. The record indicates that there is a dispute between the Port District and Paco concerning the responsibility

⁶ For example, the SDUPD's (and, prior to February 1963, the City's) status as lessor would seem to be clear indicia of ownership duties and responsibilities, particularly in light of the SDUPD's attempts to avail itself of favorable provisions thereunder in both the administrative and litigation proceedings.

for discharges. . . . It is not appropriate for the Regional Board or the State Board to involve itself in deciding issues of allocation of responsibility between different parties to a cleanup. We have concluded that the Port District is a liable party because it is a landowner with knowledge and significant control over the property and thus should be held primarily responsible.” (emphasis added.)

The State Board further noted that, in light of this determination, it may be appropriate for the Regional Board to direct the parties to submit a plan specifying the roles of each party in implementing the CAO. In other words, having established that each party was liable, the parties were left to allocate responsibility among themselves. This is precisely the approach that should be adopted in the final CAO.

Similarly, in opting to name both the County of San Diego and City of National City as liable parties (*In Re County of San Diego, City of National City, et al.*, WQO 96-2), notwithstanding “relatively minor contributions, the State Board stated it is not within the authority of the SWRCB or the SDRWQCB to apportion responsibility for the remediation activities.” (*Id.* at n.8) The State Board went on to acknowledge that “principles of equity” suggested that the City should not bear a substantial portion of the cost of the overall remediation effort, given its limited easement authority.

This issue is exacerbated by the Regional Board’s acknowledgment that: (i) it has the discretion to name the Port District as a “discharger,” and (ii) based upon the three elements of ownership, knowledge of, and the ability to regulate the discharges which occurred during the lease terms, the Regional Board “can conclude that the Port District caused or permitted waste to be discharged to San Diego Bay, creating a condition of pollution in the Bay at the Shipyard Sediment Site.” (Revised Draft Technical Report, 11-2, 11-3)

V. WATER CODE SECTION 13304 DOES NOT IMPOSE JOINT AND SEVERAL LIABILITY

The Water Code, including section 13304, does not impose joint and several liability. While the Regional Board has previously asserted its authority to impose joint and several liability via cleanup and abatement orders, it appears to have done so based on implied state policy favoring clean up and, perhaps, generally recognized common law principles.

A. Legislative History of Water Code Section 13304

In evaluating how a court might decide the issue, the analysis begins with the language of Water Code Section 13304. Axiomatic rules of statutory construction require courts to ascertain legislative intent by first examining the plain meaning of the statute. (*Hassan v. Mercy American River Hospital* (2003) 31 Cal.4th 709, 715-716) In interpreting a statute, “[c]ourts generally give great weight and respect to an administrative agency’s interpretation of a statute governing its powers and responsibilities.” (*Id.*) Courts may also look to the legislative history in discerning

the intent of the legislature. (See *Moradi-Sia'al v. Fireman's Fund Insurance Companies* (1988) 46 Cal.3d 287, 300-301.)

A review of the legislative history of Water Code Section 13304 reveals broad descriptions of the policies favoring clean up and protection of State waters, without any mention of joint and several liability. Likewise, California (state and federal, reported and unreported) case law contains no discussion of the imposition of joint and several liability under Section 13304. In 1992, section 13304 was amended to significantly strengthen regional boards' investigative and oversight authority, as well as enforcement remedies. No mention, however, was made of joint and several liability in furtherance of these efforts.⁷ Cumulatively, these actions reflect a conscious decision by the legislature to refrain from seeking to require joint and several liability.

State Board Resolution No. 92-49, entitled "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code 13304," provides a detailed explanation of the policies and procedures applicable to all investigations and cleanup and abatement activities related to a discharge or threat of discharge to waters of the State. Resolution 92-49 also contains no mention of joint and several liability. It does state, however, that where necessary to protect water quality, regional boards may name other persons as dischargers, "as permitted by law."

To the extent decisions of the State Board or various regional boards address the concept of joint and several liability, any such authority would derive from common law principles that apply in circumstances involving multiple sources, resulting in a single and indivisible harm. As the United States Supreme Court recently observed, the starting point for consideration of joint and several liability is Section 433A of the Restatement (Second) of Torts. (*Burlington Northern & Santa Fe Railway Col v. United States*, 129 S. Ct. 1870 (2009)) Applying these principles, joint and several liability does not attach where "there is a reasonable basis for determining the contribution of each cause to a single harm." (*Id.* at 1881, *citing* Restatement (Second) of Torts § 433A(1)(b) (emphasis added)) A relatively recent decision addressing the quantum of proof necessary to establish a reasonable basis for apportionment – in a non-CERCLA case involving environmental torts – held that: (i) a fact finder may rely on the "available evidence" in apportioning liability among joint tortfeasors; and (ii) the burden of production necessary to support a showing of divisibility is "low." (*In re MTBE*, S.D.N.Y. Case No. 00 NDL 1898, Docket No. 352 (July 14, 2009))

B. Joint Liability of Landlords and Lessees for Discharges

Pursuant to well established precedent under real estate and environmental case law authority, joint and several liability regularly applies to responsibility for discharges among lessees and lessors. The decision in *In Re Southern California Edison* is instructive on this point. In *In Re Southern California Edison*, WQO 86-11, the State Board noted a "series of memoranda and

⁷ There have been several legislative attempts to amend various state environmental laws to incorporate express joint and several liability provisions (yet the author is unaware of any such efforts having been enacted).

letters issued by the Office of the Chief Counsel.” (*Id.* at 4) These opinions concluded that, under both the exceptions to the common law rule of landowner non-liability and the more recent California cases applying negligence principles, a landowner-lessor may be held jointly liable with a lessee for waste discharges occurring on the leased premises during the term of the lease.” (emphasis added)⁸

The State Board further stated that “case law in support of this conclusion is substantial.” (*Id.* at 4, citing *Becker v. IRM Corp.* (1985) 38 Cal.3d 454, citing with approval discussion in 3 *Witkin, Summary of California Law* (8th Ed.) Section 453A; *Brennan v. Cockrell Investments* (1973), 35 Cal.3d 796; see also *Uccello v. Laudenslayer* (1975) 44 Cal.App.3d 504; *Levy-Zentner Co. v. Southern Pacific Transportation Co.* (1977) 74 Cal.3d 762, 794; *Stoiber v. Honeychuck* (1980) 101 Cal.3d 903; *Rosales v. Stewart* (1980) 113 Cal.3d 162; *Swanberg v. O'Mectin* (1984) Cal.App.3d 325)

California Civil Code § 658 provides that real property consists of the land, all that is affixed to the land, all that is incidental or appurtenant to the land, and that which is immovable by law. California Civil Code § 1013 states that anything permanently affixed to the land of another belongs to the owner of the land. The Port District’s reliance upon the City’s MS4 easement is specious at best. Under *City of Los Angeles v. San Pedro Boat Works*, 635 F.3d. (2011), the court found that a mere easement does not rise to a level of an ownership right, nor does it somehow shift strict liability on behalf of the owner of the municipal stormwater system to the easement holder.

Also, *Earle v. Kelly*, 21 Cal. App. 480, 484 (1913), found that the common law rule is that a tenant of real property has no right to remove such fixtures, whether they have been placed there at his own expense, or not; for whatsoever addition he may make to the real property of his landlord he loses all right of ownership therein. While *Earle v. Kelly* is clearly an old case it is still good law because it is so fundamental. The owner of the real property owns the land and everything permanently attached to the land.

It is clear that pre-existing permanent storm drains belong to the landowner, i.e., the Port District. The Port District, as the owner of the shipyard storm drains and MS4 stormdrain system on the tidelands Shipyard Sediment Site, is jointly and severally liable for any discharges from such storm drains during its period of ownership.

⁸ See, e.g., letters dated February 24, 1976 and April 30, 1976 to attorneys for the U.S. Department of Agriculture; memo dated May 27, 1981 to Executive Officer, Region 9; memo dated September 10, 1981 to Executive Officer, Region 7; memo dated February 21, 1984 to Region 9, and memo dated June 25, 1984 to Executive Officer, Region 1. *Id.* at n.1.

VI. ILLICIT DISCHARGES FROM THE TIDELANDS MS4 FACILITIES DURING THE PORT DISTRICT'S OWNERSHIP OF THE SHIPYARD SEDIMENT SITE ARE IRREFUTABLE AND SUPPORTED BY SUBSTANTIAL EVIDENCE

A. Publicly Available Records Impart Actual and/or Constructive Knowledge Upon the Port District for Illicit Discharges to Bay by Historical Tenants

The Port District's assertions that there were no discharges of contamination during its ownership of the shipyards tidelands and MS4 before 1979 are contradicted by the lengthy SAR, analytical data and related reports in the public record for the Shipyard Sediment Site. Multiple publicly available documents provide compelling evidence that the Port District was fully aware of illicit discharges to the Bay by its historical tenants, was aware of water quality concerns and regulations, and was able to enforce a level of control over its tenants. For example:

- U.S. Public Health Service (1965)
 - A. Sources of discharges in 1951 and 1963 from fish canneries, kelp processing, fish and animal reduction, condenser cooling, North Island NAS reflect suspended solids in pounds per day of 119,550 and 47,218, respectively. (SAR393634, SAR393641)
 - B. Vessels discharging wastes to San Diego Bay include the U.S. Navy and U.S. Coast Guard. (SAR393635-39)
 - C. By 1963, the largest single group of vessels discharging untreated domestic wastes was the U.S. Navy. (SAR393646)
 - D. "Port District and Navy regulations prohibit the discharge of garbage by grinding or overboard to the waters of San Diego Bay." (SAR393635)
 - E. Water Board Resolution No. 64-7 – Navy ships docked at San Diego Bay are chief contributors of raw, untreated waste. "[T]he discharge of raw ships' wastes into San Diego Bay does not conform to water quality criteria adopted by this Regional Board." (SAR393674-5)

- CRWQCB (1966)
 - A. Water Board Resolution No. 66-22 – Notice mailed on 8/10/66 to all interested organizations that a public hearing would be held on 9/15/66 regarding modification of beneficial use protection and water quality policy of San Diego Bay. (p. 11)
 - B. Statement of Water Quality Control Policy for San Diego Bay
 - a. The Port District expects the following:
 - i. Remedial dredging and miscellaneous projects to cost \$10 million in next few years. (p. 7)
 - ii. Industrial development of east side of Central and South San Diego Bay. (Id.)

- iii. Dredging projects planned and anticipated by Port District, Navy, Army Corp of Engineers, and State of California could produce 70 million cubic yards of dredge material. (*Id.*)
- iv. Navy currently dredging and using dredge material for a 1,300,000 cubic yard fill on bay side of Silver Strand. Future expansion will necessitate additional dredging. (*Id.*)
- v. A 1953-55 bacteriological sampling program indicated a 6,000 yard long area adjacent to the Navy installations and industrial waterfront was impaired because of sludge deposits. (p. 9)
- vi. Resolution No. 64-7 adopted in 1964 as a result of vessels (mainly Navy) discharging raw sewage. (p. 10)
- vii. Kelco Company discharging untreated industrial waste. (*Id.*)
- viii. Westgate-California Corporation discharges untreated industrial waste from tuna cannery and olive packing operation. (pp. 10-11)
- ix. Rohr Corporation discharges metal treatment process rinse water. (p. 11)
- x. Solar, a Division of International harvester, discharges metal treatment process rinse water. (*Id.*)
- xi. Port District discharges 4,500 gallons per day of plane washing and paint stripping washdown water from Lindbergh Field. (*Id.*)
- xii. North Island Naval Air Station discharges waste water from shop complex. (*Id.*)
- xiii. Outline of objectives regarding discharges, dredging and construction projects. (p. 25)

- U.S. Department of the Interior (1969)

- A. "Regulations of the Port District, the Navy and Coast Guard and the State-Federal Water Quality Standards for the Bay prohibits disposal of garbage, sewage and other floatable or settleable material to the Bay. However, the direct discharge of untreated sewage and other wastes from vessels is a common practice. Vessel wastes that reach the Bay include sanitary sewage (usually weaker than typical domestic sewage) and floatable material such as oil, garbage and trash." (SAR393738)
- B. "Since 90 to 95 percent of all vessel activity in San Diego Bay is conducted by the U.S. Navy, most of the oil spills observed are attributable to naval activity." (SAR393740)
- C. "Since 1962 control of the Port of San Diego, except for military installations, has been under a unified port authority." (SAR393741)
- D. Table of major industrial waste dischargers – Solar Corp., Westgate-Calif. Corp., Kelco Co., Rohr Corp., U.S. Navy. (SAR393750)
- E. "Military vessels represent the greatest afloat population on San Diego Bay." (SAR393752)

- F. "Disposal of sewage, trash and garbage within the Bay is also prohibited by section 8.50 of the Unified Port District Code. Enforcement of this regulation is delegated to the Harbor Police who report very few violations. Port District, Coast Guard and Navy regulations also prohibit the disposal of garbage and trash into the waters of San Diego Bay." (SAR393754)
- G. The greatest number of garbage and sewage solids sightings was in the Naval Station. (SAR393758, 393766)
- H. "Analyses of core samples from several points within the U.S. Naval Station revealed a layering of sludge with several inches of fairly stable material overlying a layer capable of active decay." (SAR393762)
- I. "The master plan of port development shows a second harbor entrance and extensive dredging and construction in the southern end of the bay. Changes in hydraulic characteristics resulting from the dredging and the second entrance will be dramatic and will probably alter considerably the bay's present ecological regime." (SAR393768)

- Complaint to Port District from Delta Lines Re: Sand Blasting at San Diego Marine Construction Co. (1970)
 - A. "An appointment is requested to discuss the residue from sand blasting that emits from the San Diego Marine Construction Co., our next door neighbor who is also a tenant of the San Diego Unified Port District." (SAR163143)

- Arsenic Treatment of Drydock by San Diego Marine Construction Co. (late 1960s, early 1970s)
 - A. Request by SDMC to San Diego Regional Water Control Board for chemical treatment against marine borers using sodium arsenite solution. (SAR374629)
 - B. Table of results of arsenic assays associated with chemical treatment of SDMC dry dock. (SAR374638)

- CRWQCB Report on Shipbuilding Wastes to Bay (1972)
 - A. Conclusions (SAR374270)
 - i. Wastes from shipbuilding and repair facilities do enter San Diego Bay, including antifouling paint, red lead primer, zinc chromate primer, sandblasting and debris.
 - ii. Improper cleaning of dry docks and marine railways may be responsible for greatest contamination of waters and sediments.
 - iii. Ship's crew remains aboard larger military vessels during repair operations and continue to use sewage and water systems.
 - iv. Sewage collection and disposal from dry docked ships not provided at shipyard.

- v. Heavy metal concentrations higher near shipbuilding repair facilities than other parts of San Diego Bay.
 - vi. Area of highest concentration of heavy metals in Shelter Island Commercial Basin.
- B. Descriptions of tenants (SAR374284-303)
- USEPA Report of Wastewater Discharge to Bay by SDMC Co. (1972)
 - A. "Wastewaters are being discharged from your floating dry dock into South San Diego Bay in violation of Section 13 of the River and harbor Act of 1899 (the 'Refuse Act', 33 USC 407)." (SAR374733)
- San Diego Union Tribune – Gasoline Spill Closes Shipyard (1973)
 - A. San Diego Marine Construction shut down operations to avert fire after discovery of a fuel leak. Spill dumped 200 gallons of gasoline into bay. (SAR374801)
- Department of Agriculture letter to San Diego Marine Construction re: Arsenic Use at Drydock (1974)
 - A. Department of Agriculture acknowledging letter from CRWQCB concerning sodium arsenite treatment for control of marine borers by SDMC. Requesting sampling for arsenic residues. (SAR3748810)
- USEPA Guidelines for the Control of Shipyard Pollutants. Draft Report to the RWQCB (1974)
 - A. At the request of the RWQCB, the National Field Investigations Center-Denver conducted investigations of the San Diego shipyards from March 18 to April 5, 1974 in order to evaluate the shipyard waste control practices, and the influences of those practices on San Diego Bay water quality factors in order to develop a model NPDES permit for San Diego commercial shipyards. (SAR374318)
 - B. Conclusion – San Diego Bay is being polluted by heavy metals from shipyard removed from ship hulls. (SAR374319)
 - C. "Federal Water Pollution Control Act Amendments of 1972 require that discharge of all pollutants be controlled insofar as is technically and economically feasible." (SAR374330)
 - D. A search of published information, including San Diego Bay, "indicated high concentrations of pollutants, primarily heavy metals in sediments in the vicinity of shipyards." (SAR374330)
- Young, et al., Marine Inputs of Polychlorinated Biphenyls and Copper from Vessel Anti-Fouling Paints (SCWRP-TM212-74) (1974)

- A. Data for 1972 from the two largest shipyards in San Diego Bay indicate that approximately 12,600 gallons of antifouling paint were used during that year. Data from Barry (1972) implies that the total value of antifouling paint applied to commercial and naval vessels in 1972 at these 2 yards was 19,400 gallons. (p. 16)
 - B. Estimated annual application rates of PCB 1242, PCB 1254 and copper to recreational commercial and Naval vessels via antifouling paints 1973.
 - a. San Diego Bay (p. 18)
 - i. Paints (gal./yr) = 22,100
 - ii. PCB 1242 (gal./yr) = 25
 - iii. PCB 1254 (gal./yr) = 58
 - iv. Total PCB (gal./yr) = 83
 - v. Copper (metric tons/yr) = 50
- U.S. Department of Justice Complaint to SDUPD re: Campbell Industries' Discharge Violations to Bay (1974) (SAR163160-1)
 - - A. Letter submitted with respect to violations of the Refuse Act of 1899, 33 U.S.C. 407 as reported by the U.S. Coast Guard. Violations include:
 - i. 12/11/70 discharge of sand blast refuse.
 - ii. 8/15/72 discharge of paint residue.
 - iii. 8/15/72 discharge of diesel oil.
 - iv. 11/14/73 discharge of considerable amount of paint.
 - B. Campbell in violation of criminal laws, and Coast Guard is asking for injunctive relief.
 - C. "It is our understanding that these actions also are in violation of their lease terms with the San Diego Port Authority."
 - Shipyard Lease Agreements
 - A. BAE: Gives Port District the ability to control BAE's activities and hence, potential discharges. The written lease and amendment agreements between BAE and the Port require that BAE use the BAE Leasehold exclusively for shipbuilding and repair and related marine activities, authorizes the Port District to suspend operations under certain circumstances, prohibits BAE from assigning or subleasing the site without the Port District's permission, permits the Port District to inspect the BAE Leasehold, provides detailed terms governing the use and disposal of "hazardous substances," permits the Port District to approve or deny termination of the lease by BAE, and permits the Port District to terminate the lease for violations of the lease's terms and conditions.
 - B. SDMC: The lease provisions gave the City and later the Port District significant control over SDMC's activities. SDMC entities are not proceeding with cleanup and

have wholly failed to participate in these proceedings. Accordingly, it is appropriate for the Port District or the City to be considered *primarily* liable for compliance with the TCAO.

- C. The State Board in interpreting Water Code section 13304 has consistently held that where the landowner has knowledge of the discharge and sufficient control of the property, the landowner should be subject to a cleanup order under Water Code section 13304. (*See, e.g.*, Order Nos. 84-6, 86-18, and 89-8).
- B. Shipyard Releases of COCs via the MSW4 Stormwater Outfall and Direct Shipyard Discharges Prior to 1979 Were Significant and Are Supported by Substantial Evidence

The Port District claims that there have not been discharges of contamination from its MS4 facilities and cites to *Natural Resources Defense Council v. County of Los Angeles* (2011) 636 F.3d 1235 in support of its position. This claim is untenable, contradicted by substantial evidence in the SAR and publicly available records, and must be rejected. Moreover, the Port District's reliance upon *NRDC v. County of Los Angeles* is misplaced and misleading as demonstrated below.

As set forth in detail in the June 23, 2011 Technical Comments Submitted by ENVIRON, municipal stormwater outfall SW4 receives stormwater from an approximate 45-acre area in the City of San Diego and discharges directly to the Site between Piers 3 and 4 (Figure 33-6 in CRWQCB, 2010). SW4 also directly discharged shipyard stormwater runoff originating from an approximate 2-acre area in the southeastern portion of BAE shipyard/tidelands area. (Biggs Engineering Corporation, 1983; Bechtel, 1993; SWM, 1998a)

All five Site primary COCs (CRWQCB, 2010) are associated with shipyard operations within the tidelands area owned by the Port District draining directly to SW4. (Environ, 2011(b)) Polychlorinated biphenyls (PCBs), copper, tributyltin (TBT), and mercury are or were associated with spent marine paints and sandblasting material to concentrations as high as 1-30% by weight. (CRWQCB, 1972; Jensen, 1972; Young et al., 1974; Larcom et al., 1996; USEPA, 1999)

Shipyard discharges through the SW4 outfall represent one of many environmental pathways for the release of shipyard-derived COCs to the Shipyard Sediment Site during the Port District's trusteeship (Environ, 2011b):

- Shipyard stormwater outfalls SW1, SW2, SW3, SW5, SW6, SW7, and SW8 are also significant discharge points for many of the stormwater-related COC releases (Figure 1). Since these outfalls drained only areas of the shipyard, they represent discharge points exclusive to the shipyards. The SAR contains substantial credible evidence regarding COC discharges through these outfalls, including monitoring of COCs in stormwater effluents (summarized in CRWQCB, 2010) and numerous reports of releases and spills. (SWM, 1995; CRWQCB, 2010)

- Sandblasting and paint wastes of the shipyards contained high concentrations of PCBs, TBT, copper, and mercury. From the beginning of San Diego Marine Construction Corporation's use of the Site beginning in 1914 through to the late 1970s, sandblast and paint wastes were discharged directly to the Bay from upland and drydock areas. (Anchor, 2005; Woodward Clyde, 1995) Circa 1971, CRWQCB estimated that 5-10% of sandblasting material was discharged to San Diego Bay, a mass of approximately 200-300 tons annually. (CRWQCB, 1972)
- Direct leaching of copper, mercury, PCBs, and TBT from marine vessels hulls was also a significant source of COCs to the Site. By design, many of these COCs leach easily from vessel paints to water, leading to their inadvertent accumulation in sediment. For example, the US Navy estimates ship hulls represent 90% of the copper loading to San Diego Bay due to passive leaching from in-water vessels and vessel washing (Johnson et al., 1998; Chadwick et al., 1999) TBT from vessels has been, and continues to be a source of concern for San Diego Bay (Lenihan et al., 1990). Jensen et al. (1972) noted detectable levels of PCB emitted from a boat hull painted with PCB-impregnated marine paints.
- Functional fluids and oils from shipyard equipment and infrastructure were significant potential sources of PCBs to shipyard stormwater runoff. Such fluids were also directly released from bilge waters associated with ship maintenance, operation, and repair due to the numerous uses of such fluids in ships (USEPA, 2006). Another significant release point for such fluids would be associated with leakage of hydraulic or lubricating oil from winches or cranes used to move ships along the marine railways rails to and from the water (e.g., Marine Railways 1 and 2 near BAE Pier 1; Figure 1). Fluids used in the marine railways would include lubricants and heat transfer fluids used as hydraulic, machine, and cutting oils associated with the wide variety of machinery or those associated with winches used to haul ships up the railways (as noted in facility maps in Booth (2004) - SAR163118, SAR163121, and SAR163129). Pease (1998) stated that machinery in the marine railways contained hydraulic fluid, and that these represented potential discharge points to San Diego Bay. During BAE's partial removal of contaminated soils and sediments within the Marine Railways 1 and 2 in 1998, Ogden (1998) noted the presence of oils and hydrocarbon sheens that may have been attributed to these fluids. Daily notes during the 1998 remediation include observations of "oil/water 'mousse' layers of oil sheen...", documenting a saturation of the area with hydrocarbon fluids.
- Empirical chemical measurements also confirm that the Marine Railways in the Pier 1 area contained potential PCB-laden wastes such as oils, paint, and sandblasting grit (Ogden, 1998; Anchor, 2005; Anchor, 2006). Analytical measurements of PCBs in soils by BAE after top layers of the Pier 1 marine railways area were removed documented the presence of PCBs to concentrations as high as 155,400 µg/kg (Ogden, 1998), the highest concentration of PCBs found in sediments or soils at the Shipyard Sediment Site. These samples indicated the presence of Aroclor 1248, a lighter Aroclor that was often used in marine paints and oils/fluids (OECD, 1973; Johnson et al., 2006; Erikson, 1997). Fifty-

five percent of the PCBs in samples from the marine railways and adjacent Pier 1 sediment contained Aroclor 1248. More recent monitoring by Anchor (Anchor, 2005; Anchor, 2006) confirmed Aroclor 1248 presence in groundwater and sediment porewater (concentrations as high as 2.7 µg/L), reflecting the flux of PCBs from the marine railways to San Diego Bay at Pier 1. Sediment data also indicate Marine Railways 1/2 as a dominant source of PCBs to Site sediment in the northern portion of the BAE Shipyard. The two highest concentrations of PCBs in sediment noted by Exponent (2003) are located in the subtidal area of the BAE Pier 1 marine railways (36,000 µg/kg at SW04 and 34,000 µg/kg at SW08). Both samples bear a strong Aroclor 1248 signature (Aroclor 1248 comprised 44% of the total Aroclors) similar to the Aroclor 1248 signature in the source soils located within the marine railways (Ogden, 1998; Anchor, 2005; Anchor 2006). During a 1998 inspection of the marine railways area, an inspection noted that "the railway was made up predominantly of coarse black spent sandblasting grit which was flecked with reddish brown paint chips and large flakes of metal" and that the inspector "was struck again by the amount of spent sand blasting grit, paint chips, metal flakes, and oil and grease left in the railways" (Moser, 1998). The erosion and resuspension of this material from Shipways 1 and 2 represented a continuous source of PCBs to the Site from the areas until the final shipways remediation in 2006 (Anchor, 2005; Anchor, 2006).

- The presence of multiple transformers and other electrical infrastructure containing PCB-containing dielectric fluids at the BAE Shipyard (an industry with significant electrical demands) in direct proximity to the Bay represent another likely source of PCBs to Site sediments. For example, a 1990s SWM facility map (Booth, et al., 2004 - SAR163351) shows four electrical transformer stations located on piers above water and adjacent to water. PCB information on these transformers is not available, although as late as June of 1997, at least one SWM transformer in the Pier 4/SW-4 area was noted as having PCBs present in dielectric fluid (Halvax, 1997). The presence of PCBs in leaking transformers on piers directly over San Diego Bay represents a direct source for the contamination of Site sediments with PCBs.
- PCBs in solid materials used in shipbuilding and repair activities also represented a direct source of PCBs. Regulatory agencies have long recognized PCBs are ubiquitous in ships, with concentrations in the percentage level range for many materials, including insulation, plastics, small foam rubber and rubber parts, adhesive tape, insulating materials, gaskets used in heating, ventilation and air conditioning (HVAC) and other duct systems, caulking and grout, felt and cork, adhesives and tapes, electronic equipment, voltage regulators, switches, reclosers, bushings, electromagnets, caulking, waterproofing compounds, plastics, antifouling compounds, and fire retardant coatings (Larcom et al., 1996; USEPA, 1999; George et al., 2005; USEPA, 2006). PCB-contaminated gaskets, materials generated during shipyard activities, were noted as being handled by BAE in 1998 (SWM, 1998b). Releases of ship solid materials containing PCBs occurring as a result of direct or indirect disposal of ship wastes to San Diego Bay during shipyard ship maintenance and shipbuilding is likely. Due to the extremely high concentration of PCBs

in such materials, even minor releases of waste would result in PCB sediment contamination.

- Creosote piers and other in-water infrastructure containing HPAHs was a significant source of HPAHs to Site sediment. Leaching of HPAHs from creosote-impregnated marine pilings was noted to be the dominant source of HPAHs to San Diego Bay (Chadwick et al., 1999; Katz et al., 1995; Katz, 1998).

As in *NRDC v. County of Los Angeles*, sufficient evidence exists to find that the MS4 owned by the Port District discharged pollutants into the Shipyard Sediment Site. The Port District's unsupported assertions that shipyard-derived COCs were not discharged through SW4 before 1979 is substantively defective and untenable.

VII. THE PORT DISTRICT'S REFERENCES TO SDG&E'S INSURANCE ASSETS IS IMPROPER AND SHOULD BE STRICKEN

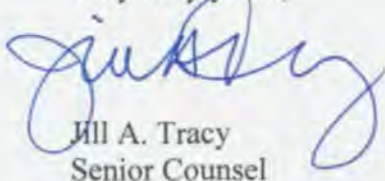
The Port District alleges that SDG&E has "hundreds of millions of dollars of liability coverage" that would be applicable to the Port's responsibility for any alleged "orphan shares" and therefore "there is no basis to conclude that the Port's tenants will be unable to cover the costs of remediation." The Port District's statements are without any merit factually or under the law, in violation of Cal. Evidence Code § 1155, and should be stricken.

At this time, SDG&E has not obtained any insurance proceeds from its insurance carriers related to this matter. Moreover, there is no factual or legal basis to hold SDG&E's insurance carriers responsible for the defunct shipyard tenants of the Port District.

VIII. CONCLUSION

For the reasons set forth herein, SDG&E respectfully requests that the Regional Board reject the San Diego Unified Port District's request that it not be named as a primary discharger at the Shipyard Sediment Site

Very truly yours,



Jill A. Tracy
Senior Counsel

June 23, 2011

Via Electronic Mail (in PDF)

Ms. Jill Tracy
Senior Environmental Counsel
San Diego Gas & Electric
101 Ash Street, HQ13
San Diego, CA 92101

Re: Technical Comments on May, 26, 2011 Documents Submitted on Behalf of Parties to the San Diego Shipyard Sediment Site

Dear Ms. Tracy:

At the request of San Diego Gas & Electric (SDG&E), ENVIRON International Corporation (ENVIRON) has prepared this summary letter to present technical comments on recent documents produced for the public comment period ending May 26, 2011 for the San Diego Shipyard Sediment Site (Site).

ENVIRON has four primary comments, detailed below:

1. There is significant evidence that documents the discharge of shipyard-derived Site Chemicals of Concern (COC) to the Site via municipal stormwater (MS4) outfall SW4;
2. Samples of Material from Catch Basin 1 (CB-1) cannot be Used to Evaluate Transport of PCBs from the Former Silvergate Substation
3. ENVIRON concurs with City of San Diego's May 26, 2011 comment (City of San Diego, 2011) regarding the insignificance of the COC contribution to the Site from municipal (i.e., non-shipyard) stormwater via SW4;
4. There is no evidence to support a conclusion that Site-derived chemicals result in unacceptable levels of human health risk; and
5. Inclusion of polygon SW29 into the Site remedial footprint is unwarranted, technically unsupportable, and highly speculative.

1.0 Shipyard Releases of COCs via the SW4 Stormwater Outfall and Direct Shipyard Discharges Prior to 1979 Were Significant and Are Supported by Substantial Evidence

Municipal stormwater outfall SW4 receives stormwater from an approximate 45-acre area in the City of San Diego and discharges directly to the Site between Piers 3 and 4 (Figure 33-6 in CRWQCB, 2010). Prior to stormwater controls implemented by BAE in the early 2000s, SW4 also directly discharged shipyard stormwater runoff originating from an approximate 2-acre area in the southeastern portion of BAE shipyard/tidelands area (Biggs Engineering Corporation, 1983; Bechtel, 1993; SWM, 1998a). Stormwater infrastructure in this area of the shipyard was directly plumbed to the subsurface MS4 stormwater main such that shipyard stormwater entered the main just prior to the SW4 outfall (Figure 1). Although the current shipyard stormwater infrastructure draining to SW4 was constructed in 1983 (Biggs Engineering Corporation, 1983),

upon information and belief, prior to 1983 a portion of the shipyard stormwater drainage system drained to the existing municipal infrastructure on the tidelands area, draining to the SW4 outfall.

In his expert opinion on behalf of San Diego Unified Port District (SDUPD), Robert Collacott stated that there "is no evidence that storm water flowing into portions of the MS4 that are owned and/or operated by the Port District has contributed to sediment contamination in the Shipyard Sediment Site" (Collacott, 2011). Under the assumption that SDUPD owned and/or operated the MS4 stormwater system located on the tidelands property draining to SW4 and San Diego Bay during its ownership tenure (1963 to present), the expert opinion of Collacott is substantively deficient in light of the many documented releases of COCs to shipyard areas draining to SW4 over many decades.

As stated by the City of San Diego (2011): "the types and quantities of wastes produced in ship building and repair operations, runoff from the BAE leasehold is likely to have contained significant quantities of chemicals of concern found in Shipyards sediments". The portion of the shipyard stormwater infrastructure directly draining to SW4 drains an approximate 2-acre area within the tidelands and has been present at least since 1983 and most likely, before. (Bechtel, 1993; SWM, 1998a). Collacott (2011) is incorrect in stating that the shipyard/tidelands area draining to SW4 contains only "office facilities". Facility maps demonstrate that the tidelands area draining to SW4 included a painting and sandblasting area, hazardous wastes and material storage, a welding shop, a former sandblast waste storage area, and several cranes (Bechtel, 1993; SWM, 1998a).

All five Site primary COCs (CRWQCB, 2010) are associated with shipyard operations within the tidelands area draining directly to SW4. Polychlorinated biphenyls (PCBs), copper, tributyltin (TBT), and mercury are or were associated with spent marine paints and sandblasting material to concentrations as high as 1-30% by weight (CRWQCB, 1972; Jensen, 1972; Young et al., 1974; Larcom et al., 1996; USEPA, 1999). The Shipyard Administrative Record ("SAR") contains numerous evidence of spilled paint/sandblast materials that would be carried with stormwater runoff from the area draining to SW4. For example, a 1991 CRWQCB memo supplied in Booth (2004) noted that:

"While at Chevron's Tank Farm located adjacent to Southwest Marine, sand blasting dust was observed on the ground at Chevron. The dust from sand blasting operations at Southwest is continually observed coming over the fence haze over the sand blasting area was obvious."; and

[SWM was] *"discharging sand blast dust to San Diego Bay through Chevron's storm drain system".*

The Chevron tank farm is located immediately adjacent to the tidelands area of SWM that drained directly to SW4. If inspectors concluded that sandblast material deposited on Chevron's property would enter Chevron's stormwater system, it is clear that this environmental pathway would also be significant for stormwater in the shipyard area draining to SW4, which hosted sandblast operations at the time of the letter (Bechtel, 1993; SWM, 1998a).

For the period in which spill and discharge records were kept (1980s to present), the SAR contains substantial evidence of discharges, including dozens of additional reports involving sandblast waste spills that entered or likely could have entered San Diego Bay following stormwater runoff from the shipyard to SW4. For example, on June 18, 1992, the area west of the hazardous waste yard exhibited sandblast grit in the drainage area of the storm drain that drained to SW4 (SWM, 1992a). During a June 16, 1995 inspection, poor housekeeping and deficient stormwater best management practices were noted in an area of the shipyard that

drains to the SW4 outfall (SWM, 1995). On January 9, 1998, observations during a heavy rain event noted that there was no containment for a shed containing spent sandblasting grit and that stormwater at the shipyard appeared to contain paint (Carpenter Environmental Associates, Inc. 1998). On March 25, 1998, a facility inspection during a significant rain event noted that large steel totes used for moving sandblasting grit around the yard were quickly filling with rain, resulting in the potential for runoff because the totes did not have secondary containment (Moser, 1998). On September 22, 1989, it was noted that sandblast grit and paint chips were being discharged to San Diego Bay in stormwater (SWM, 1989). These spill and discharge observations are typical of the shipyard environmental practices that facilitated transport of copper, mercury, TBT, and PCBs in sandblast and painting wastes from shipyard areas to SW4.

PCBs are also known to be found in numerous industrial fluids, including dielectric fluids, hydraulic oils, machine oils, and cutting oils from the late 1920s through the 1990s (OECD, 1973; Johnson et al., 2006; Erikson, 1997; Erikson and Kaley, 2011). These fluids are present in machinery and infrastructure that were regularly used by the shipyards in direct proximity to the Bay. At least one shipyard transformer containing PCBs in dielectric fluid was present at BAE as late as 1997 (Halvax, 1997). High molecular weight polycyclic aromatic hydrocarbons (HPAHs) would also be expected to be a constituent of many of these fluids, especially lubricating oils, which exhibit HPAH contents up to several percent by weight (Potter and Simmons, 1998).

Numerous spills of oils potentially containing PCBs and HPAHs from the shipyards tidelands to the Bay were noted during the 1990s. For example, on May 30, 1992 an oil slick about 2,500 to 3,000 square feet in San Diego Bay was caused by a leak at the BAE Pier 3 Diesel Fuel Station (SWM, 1992b), located in and near areas of the shipyard draining to SW4. On April 2, 1997 and March 25, 1998, wet inspections at the facility revealed flooding and breaching of berms containing potentially contaminated stormwater (Moser, 1998). On April 22, 1991, 20 to 35 gallons of diesel #2 was spilled from a fueling truck near the head of Pier 3 (SWM, 1991), also in the area of the shipyard draining to SW4. Numerous oil sheens were observed by Carpenter Environmental Associates, Inc. (1998) during a January 9, 1998 inspection. These spills indicate that the shipyard stormwater system discharging to SW4 served as a conduit for the transport of COCs (e.g., PCBs, HPAHs) present in oils used at BAE shipyard to the Site.

Shipyard discharges through the SW4 outfall represent one of many environmental pathways for the release of shipyard-derived COCs to the Site (Figure 2):

- Shipyard stormwater outfalls SW1, SW2, SW3, SW5, SW6, SW7, and SW8 are also significant discharge points for many of the stormwater-related COC releases (Figure 1). Since these outfalls drained only areas of the shipyard, they represent discharge points exclusive to the shipyards/tidelands. The SAR contains substantial credible evidence regarding COC discharges through these outfalls, including monitoring of COCs in stormwater effluents (summarized in CRWQCB, 2010) and numerous reports of releases and spills (SWM, 1995; CRWQCB, 2010).
- As noted above, sandblasting and paint wastes contained high concentrations of PCBs, TBT, copper, and mercury. From the beginning of San Diego Marine Construction Corporation's and San Diego Marine Construction Company's use of the Site beginning in 1914 through to the mid 1970s, sandblast and paint wastes were discharged directly to the Bay from upland and drydock areas (Anchor, 2005; Woodward Clyde, 1995). Circa 1971, CRWQCB estimated that 5-10% of sandblasting material was discharged to San Diego Bay, a mass of approximately 200-300 tons annually (CRWQCB, 1972).

- Direct leaching of copper, mercury, PCBs, and TBT from marine vessels hulls was also a significant source of COCs to the Site. By design, many of these COCs leach easily from vessel paints to water, leading to their inadvertent accumulation in sediment. For example, the US Navy estimates ship hulls represent 90% of the copper loading to San Diego Bay due to passive leaching from in-water vessels and vessel washing (Johnson et al., 1998; Chadwick et al., 1999). TBT from vessels has been, and continues to be a source of concern for San Diego Bay (Lenihan et al., 1990). Jensen et al. (1972) noted detectable levels of PCB emitted from a boat hull painted with PCB-impregnated marine paints.
- As noted above, functional fluids and oils from shipyard equipment and infrastructure were significant potential sources of PCBs to shipyard stormwater runoff. Such fluids were also directly released from bilge waters associated with ship maintenance, operation, and repair due to the numerous uses of such fluids in ships (USEPA, 2006). Another significant release point for such fluids would be associated with leakage of hydraulic or lubricating oil from wenchers or cranes used to move ships along the marine railways rails to and from the water (e.g., marine railways 1 and 2 near BAE Pier 1; Figure 1). Fluids used in the marine railways would include lubricants and heat transfer fluids used as hydraulic, machine, and cutting oils associated with the wide variety of machinery or those associated with winches used to haul ships up the railways (as noted in facility maps in Booth (2004 - SAR163118, SAR163121, and SAR163129). Pease (1998) stated that machinery in the marine railways contained hydraulic fluid, and that these represented potential discharge points to San Diego Bay. During BAE's partial removal of contaminated soils and sediments within the marine railways 1 and 2 in 1998, Ogden (1998) noted the presence of oils and hydrocarbon sheens that may have been attributed to these fluids. Daily notes during the 1998 remediation include observations of "oil/water 'mousse' layers of oil sheen...", documenting a saturation of the area with hydrocarbon fluids.
- Empirical chemical measurements also confirm that the marine railways contained potential PCB-laden wastes such as oils, paint, and sandblasting grit (Ogden, 1998; Anchor, 2005; Anchor, 2006). Analytical measurements of PCBs in soils by BAE after top layers of the Pier 1 marine railways area were removed documented the presence of PCBs to concentrations as high as 155,400 µg/kg (Ogden, 1998), the highest concentration of PCBs found in sediments or soils at the Site. Additionally, these samples indicated the presence of Aroclor 1248, a lighter Aroclor that was often used in marine paints and oils/fluids (OECD, 1973; Johnson et al., 2006; Erikson, 1997). For example, 55% of the PCBs in samples from the marine railways and adjacent Pier 1 sediment contained Aroclor 1248. More recent monitoring by Anchor (Anchor, 2005; Anchor, 2006) confirmed Aroclor 1248 presence in groundwater and sediment porewater (concentrations as high as 2.7 µg/L), reflecting the flux of PCBs from the marine railways to San Diego Bay at Pier 1. Sediment data also indicate the marine railways as a dominant source of PCBs to Site sediment in the northern portion of the BAE Shipyard. The two highest concentrations of PCBs in sediment noted by Exponent (2003) are located in the subtidal area of the BAE Pier 1 marine railways (36,000 µg/kg at SW04 and 34,000 µg/kg at SW08). Both samples bear a strong Aroclor 1248 signature (Aroclor 1248 comprised 44% of the total Aroclors) similar to the Aroclor 1248 signature in the source soils located within the marine railways (Ogden, 1998; Anchor, 2005; Anchor 2006). During a 1998 inspection of the marine railways area, an inspection noted that "the railway was made up predominantly of coarse black spent sandblasting grit which was flecked with reddish brown paint chips and large flakes of metal" and that the inspector "was struck again by the amount of spent sand blasting grit, paint chips,

metal flakes, and oil and grease left in the railways" (Moser, 1998). The erosion and resuspension of this material from Shipways 1 and 2 represented a continuous source of PCBs to the Site from the areas until the final shipways remediation in 2006 (Anchor, 2005; Anchor, 2006).

- The presence of multiple transformers and other electrical infrastructure containing PCB-containing dielectric fluids at the BAE Shipyard (an industry with significant electrical demands) in direct proximity to the Bay represent another likely source of PCBs to Site sediments. For example, a 1990s SWM facility map (Booth, et al., 2004 - SAR163351) shows four electrical transformer stations located on piers above water and adjacent to water. PCB information on these transformers is not available, although as late as June of 1997, at least one SWM transformer in the Pier 4/SW-4 area was noted as having PCBs present in dielectric fluid (Halvax, 1997). The presence of PCBs in leaking transformers on piers directly over San Diego Bay represents a direct source for the contamination of Site sediments with PCBs.
- PCBs in solid materials used in shipbuilding and repair activities also represented a direct source of PCBs. Regulatory agencies have long recognized PCBs are ubiquitous in ships, with concentrations in the percentage level range for many materials, including insulation, plastics, small foam rubber and rubber parts, adhesive tape, insulating materials, gaskets used in heating, ventilation and air conditioning (HVAC) and other duct systems, caulking and grout, felt and cork, adhesives and tapes, electronic equipment, voltage regulators, switches, reclosers, bushings, electromagnets, caulking, waterproofing compounds, plastics, antifouling compounds, and fire retardant coatings (Larcom et al., 1996; USEPA, 1999; George et al., 2005; USEPA, 2006). PCB-contaminated gaskets, materials generated during shipyard activities, were noted as being handled by BAE in 1998 (SWM, 1998b). Releases of ship solid materials containing PCBs occurring as a result of direct or indirect disposal of ship wastes to San Diego Bay during shipyard ship maintenance and shipbuilding is likely. Due to the extremely high concentration of PCBs in such materials, even minor releases of waste would result in PCB sediment contamination.
- Creosote piers and other in-water infrastructure containing HPAHs was a significant source of HPAHs to Site sediment. Leaching of HPAHs from creosote-impregnated marine pilings was noted to be the dominant source of HPAHs to San Diego Bay (Chadwick et al., 1999; Katz et al., 1995; Katz, 1998).

Shipyard spills and discharges are expected to have occurred more frequently prior to SWM's appearance at the shipyards in 1979. Documents in the SAR indicate that there was less regulatory oversight or concern for pollutant discharges prior to this date. Intense regulation of shipyard waste handling practices and effluent permitting was only beginning to be implemented by regulatory agencies in the mid to late 1970s. For example, a water pollution control plan for San Diego Marine Construction Corporation was not required until 1975 (CRWQCB, 1974). This plan, which covered the time period from 1975 to 1979, was focused primarily on point source effluents, and did not require monitoring/quantification of the hydroblast and sandblasting discharges to San Diego Bay noted by SDMC on their application for discharge (SDMC, 1974). Additionally, this plan did not require chemical monitoring of stormwater runoff or sediments, which were implemented in the 1980s and 1990s to address shipyard COC releases (CRWQCB, 2010). Thus, prior to the early 1980s, it is likely that far more COCs were directly discharged by the shipyards to San Diego Bay due to the lack of regulatory oversight and development of initial management practices to reduce shipyard COC discharges.

In conclusion, the position proffered by the SDUPD expert that shipyard-derived COCs were not discharged through SW4 is substantively defective and untenable. The SAR is replete with documentation of repeated observations of spills and runoff in the areas of the shipyard tidelands stormwater system, coupled with the presence of all five COCs in the wastes and materials handled and discharged to the ground surface in this area, indicates that the discharge of shipyard-derived COCs via SW4 was significant, repeated, and contributed to a condition of pollution and nuisance observed at the Site by CRWQCB (2010). Furthermore, the position that no shipyard-derived COCs were discharge through SW4 is especially untenable for the time period prior to the late 1970s considering the relative lack of environmental controls and rigorous shipyard environmental and waste handling practices compared to the 1990s and 2000s.

2.0 Samples of Material from Catch Basin 1 (CB-1) Cannot be Used to Evaluate Transport of PCBs from the Former Silvergate Substation

The City of San Diego and Port District's May 2011 comments purport to provide evidence that CB-1 is within the transport pathway from the former Silvergate substation to SW4. Section 9.9 of the DTR presents PCB data from solid samples collected from CB-1, a small catch basin to the west of Sampson Street. This location is upgradient of SW4; therefore it is possible that stormwater originating in CB-1 could be discharged through SW4. However, data from CB-1 sampling events cannot be used to infer runoff of PCBs (or other COCs) from soils present on the Silvergate substation. CB-1 is upgradient of the flow pathway for potential substation stormwater runoff (Figure 3). Any stormwater runoff from the Silvergate substation would have flowed from the substation to the gutter on the northwest side of Sampson Street, entering the subsurface stormwater infrastructure at a gutter vault that is downgradient of CB-1. Thus, stormwater runoff from the Silvergate substation could not flow through CB-1. Accordingly, any samples collected from CB-1 are irrelevant with regard to characterizing the PCB content of substation stormwater runoff.

Moreover, two solid samples collected from the northwest gutter of Sampson Street in 2005 between the substation and upgradient from the gutter storm drain revealed only trace levels of PCBs (143-214 $\mu\text{g}/\text{kg}$; samples SGPP-102405-7 and SGPP-102405-8; TN&A, 2006). These concentrations are typical of urban soils, and do not suggest that Silvergate substation was source of PCBs to stormwater (Silberhorn, 1995). The two gutter samples are the only representative samples within a potential transport pathway from the substation to the gutter storm drain for characterizing the undiluted, alleged substation stormwater PCB runoff. Therefore, it is completely without evidentiary merit to conclude that this material, even if transported to San Diego Bay, would somehow increase in concentration by an order of magnitude to levels found in sediment at the SW4 outfall (median concentration 1,700 $\mu\text{g}/\text{kg}$, ranging from 560 to 7,500 $\mu\text{g}/\text{kg}$). It is equally improbable that sufficient material containing elevated concentrations of PCBs could also be transported from the substation secondary containment to contaminate a 1-acre area of sediment approximately one acre wide to a depth of three feet or more (Exponent, 2003).

In conclusion, CB-1 materials are irrelevant in any consideration of Silvergate substation soil and/or stormwater runoff as potential sources to stormwater draining to SW4. Relevant evidence collected immediately downgradient of the substation indicates that the Silvergate substation was not a source of PCBs to stormwater and would not be associated with the condition or nuisance and pollution alleged by CRWQCB (2010) in sediments near the SW4 outfall.

3.0 Municipal Stormwater from the City of San Diego Watershed is an Insignificant Source of COCs to the Site and Did Not Contribute to a Condition of Nuisance or Pollution at the Site

As noted by the City of San Diego (2011), the municipal portion of the 45-acre area in the City of San Diego watershed¹ draining to SW4 (i.e., upgradient of shipyard/tidelands areas) is an insignificant source of COCs to the Site relative to immediately adjacent shipyard operations. An investigation conducted by TN&A (2006) and City of San Diego (2005) of the municipal portion of the SW4 stormwater watershed (Figure 4) revealed only trace levels of PCB, copper, and mercury in stormwater solid materials (solids obtained from gutters and catch basins) collected in the municipal portion of the watershed draining to SW4 (i.e., upgradient of the entry of the municipal stormwater infrastructure into BAE shipyard/tidelands area).

The median concentration of PCBs in CB-1 and stormwater solids (160 µg/kg) is 10 times lower than that in Pier 3 and 4 sediment (1,700 µg/kg) (Exponent, 2003; City of San Diego, 2005; TN&A, 2006). The concentration of PCBs found in the City Watershed, including CB-1 is consistent with the range of PCB concentrations found in urban soils (Silberhorn, 1995) and does not indicate a point source of PCBs contributing to the condition of pollution and/or nuisance to the Bay identified by CRWQCB (2010). Similar results were noted for HPAHs, and mercury. The median concentration of PCBs in CB-1 and stormwater solids (250 µg/kg) is 7 times lower than that in Pier 3 and 4 sediment (1,700 µg/kg), concentration of HPAHs (1,500 µg/kg) is 7 times lower than sediment (11,000 µg/kg), and the concentration of mercury (0.17 mg/kg) is 6 times lower than sediment (1.0 mg/kg). The median concentration of copper in CB-1 solids (495 µg/kg) is higher than concentrations in Pier 3 and 4 sediment (260 µg/kg), however the amount of copper mass expected to originate in CB-1 is insufficient to influence concentrations in sediment at the Site. Concentrations of copper in sediment at the Site are as high as 2,200 mg/kg (SW04 station, Exponent (2003)) and are associated with sandblast wastes and other shipyard sources.

The data indicate levels of COCs in City stormwater materials (upgradient from shipyards/tidelands) are much less than (PCBs, HPAHs, mercury) or similar to (copper) those found in Pier 3 and 4 sediment (Figure 4). This is the opposite of what is usually observed when upland areas or stormwater are sources sediment contamination. In those cases, concentrations in source soils and stormwater solids are usually orders of magnitude higher than concentrations in aquatic sediments because the COCs are generally of low mobility, resulting in higher concentrations nearest their points of release/transport, decreasing with distance from the source. Additionally, when stormwater runoff is a significant pathway, concentrations in source soils and stormwater solids are generally much higher because a substantial dilution of the eroded soils and stormwater solids occur when they are deposited to and mix with existing sediment. Thus, the fact that the concentrations of COCs in the City SW4 watershed solids are not orders of magnitude higher than Pier 3 and 4 sediments indicates that this material is insufficient to cause the condition of pollution and/or nuisance to the Site in the vicinity of Pier 3 and 4 sediment (as observed by CRWQCB (2010)).

In conclusion, ENVIRON concurs with the City of San Diego (2011) regarding the relative insignificance of the SW4 municipal watershed as a source of COCs contributing to the

¹ The municipal portion of the SW4 watershed is shown upgradient of BAE shipyard in Figure 33-6 in CRWQCB (2010) and includes areas containing SDG&E facilities ("City Watershed").

condition of pollution and/or nuisance to the Site identified by CRWQCB (2010). The low concentrations of COCs in SW4 municipal stormwater materials of the City Watershed compared to concentrations in sediment suggest that shipyard tidelands sources, not municipal/SDG&E stormwater runoff, are responsible for COCs contributing to a condition of pollution and/or nuisance in Site sediment.

4.0 There is no Evidence to Support a Conclusion that Site-derived Chemicals Result in Unacceptable Human Health Risk

In his expert opinion on behalf of SDUPD, Michael Johns (Johns, 2011) noted that "PCBs are bioaccumulative, and cleanup is necessary for incremental improvement in the beneficial use of San Diego Bay by recreational and subsistence fishers." Johns' statement is not supported by any technical or quantitative analysis. However, Johns (2011) suggests that migration of fish and lobster may enable anglers in other areas of San Diego Bay outside of the Site to consume tissues with levels of Site-derived chemicals such that it may result in human health risk:

"Although fishing and shellfish harvesting do not occur on the Site because of security restrictions, there are nearby public access points and the fish and shellfish that have accumulated contaminants are mobile."; and

"The life histories of sand bass and spiny lobster, the two species targeted for human health evaluation at the Site, involve migration over large portions of San Diego Bay".

Even if long-distance migration between the Site and areas of public fishing were to occur, neither Johns (2011) nor CRWQCB (2010) provides a quantitative analysis to demonstrate unacceptable levels of human health risk associated with human health consumption of fish and shellfish migrating from the Site. The human health exposure parameters assumed by CRWQCB (2010) for the Site-specific human health risk assessment, such as concentrations of chemicals in fish and shellfish, frequency of Site fish consumption, and consumption rate, cannot be applied to evaluate risk associated with fish caught at public fishing piers because the CRWQCB's Site-specific assumptions do not apply to an exposure scenario involving an off-Site fisherman. Evaluating Site-derived risk at public fishing piers requires estimation of the proportion of Site fish consumed by public pier anglers because it is unreasonable to assume that 100% of animals consumed by anglers at any public pier would originate from the Site. Additionally, it is uncertain and highly speculative whether the concentration of Site chemicals in any long-distance fish and lobster migrants caught at public piers would be as high as individuals that restrict their movements within the boundaries of the Site, because it is possible if not just as likely that these long-distance fish and lobster migrants may eliminate Site-derived chemicals from tissue in the time period between the departure from contaminated areas of the Site and capture at public piers.

In contrast to the non-quantitative statements by Johns (2011), several realistic human health risks assessments using agency-approved methods (USEPA, 1989) to quantitatively address PCB risks associated with Site fish and shellfish have indicated an absence of human health risk at the Site (Exponent, 2003; Finley, 2011; Conder, 2011a). Parameters used in CRWQCB (2010) to estimate the potential exposure of anglers to Site chemicals greatly overestimate human exposure and risk at the Site (Finley, 2011). For example, CRWQCB (2010) Site-specific human health risk assessment exposure assumptions estimate exposure for an angler deriving 100% of their fish or shellfish diet from prey items at the Site for a period of 30 years. Mr. Tom Alo, the CRWQCB's Person Most Knowledgeable (PMK) and lead CRWQCB human health risk assessor assigned to the Site, stated in his February 16, 2011 deposition that that he agreed that these exposure assumptions were unrealistic (Alo, 2011). Using more realistic Site-

specific human health exposure assumptions, Finley (2011) calculated human health hazard and risk estimates that are below thresholds of concern (Hazard Index of 1, Excess Lifetime Cancer Risk of 1×10^{-5} , per OEHHA (2006, 2008)) for the NASSCO portion of the Site. Using the same approach and parameters detailed in Finley (2011), the highest risk potential for the inside BAE portion of the Site for the three human health chemicals of concern was found to be 1.7×10^{-6} for cancer risk and 0.33 for non-cancer hazard (Conder, 2011a). Both of these risk estimates were associated with PCBs for ingestion of spotted sand bass by the "upper bound" angler. All risk and hazard estimates for the inside BAE portion of the Site are below OEHHA (2006, 2008) thresholds of concern and do not indicate human health BUI.

In conclusion, given the critical deficiencies in the CRWQCB's human health risk assessment of the Site and lack of quantification or other support of the risk potential hypothesized by Johns (2011), it is clear that a human health risk determination at the Site remains unsupported by the evidence in the SAR. The CRWQCB (2010) and Johns (2011) conclusions regarding human health risks are speculative, lack scientific foundation, and fail to properly apply site-specific exposure parameters in accordance with applicable regulatory guidance. There is no evidence to support a conclusion that Site-derived chemicals impair Commercial and Sport Fishing and Shellfish Harvesting Beneficial Uses in San Diego Bay. Because there is no evidence of a Human Health Beneficial Use Impairment (BUI), consideration of human health should be withdrawn from Site decision-making algorithms (e.g., SWAC-based assessments of Findings 32-33 in CRWQCB (2010)) used to identify areas for potential remedial action.

5.0 The Port's Proposal to Include Polygon SW29 into the Site Footprint is Unwarranted, Technically Unsupportable, and Highly Speculative

The CRWQCB (2010) remedial footprint derivation was based on concurrent evaluations of aquatic life, aquatic-dependent wildlife, and human health BUIs at 65 individual areas of the Site, as divided according to a Thiessen polygon grid (Figure 32-1 in CRWQCB (2010)). Polygon SW29, located on the northwestern edge of the remedial footprint (Figure 5), was not identified for inclusion within the remedial footprint (CRWQCB, 2010). SW29 was not identified to exhibit risk potential to aquatic life, as based on the non-Triad data approach of CRWQCB (2010), and was not identified as a source of Site-wide human health and/or aquatic dependent wildlife risk potential because it did not rank highly using the five-COC-based Surface area Weighted Average Concentration (SWAC) scoring method (CRWQCB, 2010). Both of the aquatic life and human health/aquatic dependent wildlife approaches for remedy footprint derivation were based on multiple concurrent considerations, including multiple lines of ecological and sediment and tissue chemistry (TBT, HPAHs, PCBs, copper, and mercury) evidence to quantify risk potential and BUI, size of the polygon, economic feasibility, and technical feasibility according to guidelines established by State Water Board Resolution No. 92-49 (Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304; SWQCB, 1996). In addition, a subsequent benthic toxicity causal sediment chemistry analysis by Conder (2011b) confirmed the lack of risk potential from Site COCs to aquatic life at polygon SW29. Thus, multiple lines of evidence demonstrate that SW29 does not exhibit any of the three BUIs comprising the basis for the remedial action. For these reasons, it is not necessary to include it or additional polygons to meet the remedial goals stated in CRWQCB (2010).

Despite these multiple lines of evidence, Johns (2011) noted without any evidentiary support that "portions of polygon SW29 not currently included in the remedial footprint warrants subsequent action". Although the reasoning for action by Johns is not explicitly provided, Johns (2011) noted that "Having reviewed additional data collected from within the boundaries of the

SW29 polygon (i.e., split sample data from the samples collected by SDG&E under Order No. R9-2004-0026), [Johns] found that total PCB concentrations measured in samples represent some of the highest found within the Site."

Johns' statement regarding concentrations of PCBs in SW29 sediment is not consistent with the data. For example, concentrations of total PCBs in SW29 (820 µg/kg at the surface, 1,200 µg/kg at 0-2 feet; Exponent (2003)) are not among the highest concentrations of PCBs found at the Site. Concentrations of total PCB congeners at the following 15 polygons exhibit concentrations greater than the highest value observed at SW29 (Exponent, 2003): SW01 (1,600 µg/kg at surface), SW02 (5,450 µg/kg at surface), SW04 (27,000 µg/kg at 2-4.1 ft), SW08 (13,000 µg/kg at 2-4 ft), SW17 (1,300 µg/kg at 2-4 ft), SW20 (6,500 µg/kg at 0-1.5 ft), SW21 (2,400 µg/kg at surface), SW23 (1,500 µg/kg at surface), SW24 (5,000 µg/kg at 0-2 ft), SW28 (3,200 µg/kg at 0-2 ft), NA01 (2,000 µg/kg at 2-4 ft), NA04 (2,800 µg/kg at 6-8.3 ft), NA06 (1,400 µg/kg at 2-3.9 ft), NA09 (7,100 µg/kg at 4-6 ft), NA16 (2,000 µg/kg at 2-4 ft), and NA21 (1,300 µg/kg at 0-2 ft). Four of these polygons (NA01, NA04, NA16, and NA21) are not within the footprint, clearly indicating that SW29 does not exhibit the highest concentrations of PCBs outside the proposed remedial footprint.

Additionally, Johns indicates that part of his opinion regarding the need for action is based on a review of "split sample data from the samples collected by SDG&E under Order No. R9-2004-0026". From the SDG&E investigation, there are three sample stations within the boundaries of the SW29 polygon (ENV2, ENV3, and ENV4, as shown in Figure 5). Two of these stations are within the footprint boundary and will be dredged; the other (ENV4) is approximately 20 feet outside of the boundary to the northwest (Figure 5). Because remedial contractors will likely over-dredge the area to create a stable sloped area at the margins of the footprint, the ENV4 location will be dredged as part of the remedial action. Thus, sediments represented by these samples will be sufficiently addressed by the remedial footprint despite the lack of evidence that SW29 exhibits human health, aquatic-dependent wildlife, or aquatic life BUI.

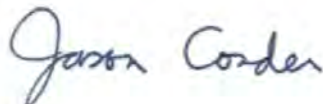
Johns also suggests that SW29 may require action because SW29 "represents an unbounded area of higher concentrations of total PCBs". Johns (2011) does not indicate the evidence or numerical criteria he relies upon in order to conclude that PCBs in this area are "unbounded". Neither Exponent nor SDG&E have collected samples to the northwest of SW29. The Exponent (2003) station SW29 represents the sample farthest from the footprint boundary (70 feet to the northwest of the boundary, Figure 5). However, historical data suggests that concentrations in surface sediment decrease to the northwest of the SW29 sample location. For example, historical data collected in 1993 (Station "G De Lappe"; CRWQCB, et al., 1996) indicates that the PCB concentration in surface sediment at the nearest location to the northwest of station SW29 is 494 µg/kg (Figure 5). This concentration is nearly half of that found at SW29 (820 µg/kg), indicating that the area represented by SW29 is bounded by a lower (not higher) concentration of PCBs. This evidence is consistent with the concentration gradient of PCBs that begins at shipyard source locations (marine railways 1 and 2), decreasing in concentration as distance to the railways increases.

Although the PCB concentrations at the "G De Lappe" and SW29 stations are greater than the PCB SWAC target to address human health and aquatic-dependent wildlife risks (CRWQCB, 2010), inclusion of a polygon or area into the remedial footprint is not solely based on PCB concentration in surface sediment. For example, polygon NA16 is not targeted for remediation despite the fact that it exhibits a concentration of 590 µg/kg in surface sediment. PCBs cannot be considered as a sole remedy driver because all five COCs, including copper, mercury, HPAHs, and TBT form the basis of Site remedial action to address benthic, human health and wildlife BUIs concurrently (CRWQCB, 2010).

In conclusion, there is no basis to include polygon SW29 into the proposed remedial footprint.

ENVIRON appreciates the opportunity to provide technical comments on the above-referenced issues.

Sincerely,

A handwritten signature in black ink that reads "Jason Conder". The signature is written in a cursive style with a large initial "J" and "C".

Jason M. Conder, PhD
Manager

JC:gw

Attachments: References
Figures 1-5

References Cited

References Cited

- Alo, T. 2011. Deposition of Tom Alo, February 16-17, 2011, San Diego, California
- Anchor. 2005. Site Investigation and Characterization Report For 401 Water Quality Certification, BAE Systems, Inc. (Formerly southwest Marine, Inc.) Bulkhead Extension and Yard Improvement Phase 2 Activities. Revised August 2005. BAE00085427.
- Anchor. 2006. Construction Completion Report Bulkhead Extension and Yard Improvement Project, BAE Systems San Diego Ship Repair, Inc. December 2006. BAE00085641.
- Bechtel. 1993. Preliminary Assessment, Southwest Marine, 2205 East Belt St., Foot of Sampson Street, Sandi ego, CA 92113. SAR050541.
- Biggs Engineering Corporation. 1983. Drainage improvement plan: Southwest Marine yard No. 5. September 27. SAR193267. Booth, S. 2004. Historical Study, San Diego Waterfront Sampson Street to 28th Street, Appendix J, San Diego, California. SAR169862.
- Booth, S. 2004. Historical Study, San Diego Waterfront Sampson Street to 28th Street, San Diego, California. SAR159479 et al.
- Carpenter Environmental Associates, Inc. 1998. 01-11-98 Memorandum Re: Site Inspection. BAE00076511.
- Chadwick et al. 1999. Sediment quality characterization, Naval Station San Diego, final summary report. US Navy Technical Report 1777. SAR372960.
- City of San Diego. 2005. Calscience Work Order No.: 05-10-0056; results from October 3, 2005 sampling by Ruth Kolb, City of San Diego. SAR281646.
- City of San Diego. 2011. Comment 3.0 to Draft Technical Report for Tentative CAO No. R9-2011-0001. May 26.
- Collacott, R. 2011. Declaration of Expert Robert Collacott in Support of the San Diego Unified Port District's Submission of Comments, Evidence and Legal Argument. May 24.
- Conder, J.M. 2011a. Technical Comments on Draft Technical Report for Tentative Cleanup and Abatement, Order No. R9-2005-0126, for the Shipyard Sediment Site San Diego Bay, San Diego, CA (CRWQCB, 2010) and Associated Administrative Record. May 26.
- Conder, J.M. 2011b. Analysis of Causality Between Aquatic Life Beneficial Use Impairment and Site Primary COCs at the San Diego Shipyard Sediment Site. Expert Report submitted on behalf of SDG&E. March 11.
- CRWQCB, NOAA, CDFG, Moss Landing Marine Laboratories and UC Santa Cruz. 1996. Chemistry, toxicity, and benthic community conditions in sediments of the San Diego Bay region. September. SAR280617.
- CRWQCB. 1972. Wastes Associated with Shipbuilding and Repair Facilities in San Diego Bay. SAR374265.
- CRWQCB. 1974. Oder No. 74-64, NPDES No. CA010 7697, Waste discharge requirements for San Diego Marine Construction Corp. SAR374821.
- CRWQCB. 2010. Draft Technical Report for Tentative Cleanup and Abatement, Order No. R9-2005-0126, for the Shipyard Sediment Site San Diego Bay, San Diego, CA.

- Erickson, M.D. 1997. Analytical Chemistry of PCBs. Lewis Publishers, Boca Raton, FL, USA.
- Erickson, M.D., Kaley, R.G. 2011. Applications of polychlorinated biphenyls. Environ. Sci. Pollut. Res. 18:135-151.
- Exponent. 2003. NASSCO and Southwest Marine Detailed Sediment Investigation. October 2003.
- Finley, B.L. 2011. Expert Report of Brent L. Finley, Ph.D., DABT, Prepared in Regards to the California Regional Water Quality Control Board's Draft Technical Report for Tentative Cleanup and Abatement Order No. R9-2011-0001 (San Diego Bay). Expert Report submitted on behalf of NASSCO. March 11.
- George, R.D., In, C.R., Johnston, R.K., Seligman, P.F., Gauthier, R.D., Wild, W.J. 2005. Seawater Leaching Investigation of Polychlorinated Biphenyls from Solid Matrices. OCEANS, 2005, Proceedings of MTS/IEEE, 1492- 1500, Vol. 2.
- Halvax, S. 1997. Environmental Projects Update. Email to Lloyd A. Schwartz, Esq. BAE00039353.
- Jensen, S. 1972. The PCB Story. Ambio 1:123-131.
- Jensen, S., Renberg, L., Olsson, M. 1972. PCB contamination from boat bottom paint and levels of PCB in plankton outside a polluted area. Nature 240:358-360.
- Johns, D.M. 2011. Declaration of Expert D. Michael Johns, Ph.D, in Support of the San Diego Unified Port District's Submission of Comments, Evidence and Legal Argument. May 25.
- Johnson, H.D., Grovhoug, J.G., Alkirs, A.O. 1998. Copper loading to U.S. Navy Harbors, Norfolk, VA; Pearl Harbor, HI; and San Diego, CA. Technical Document 3052. December.
- Johnson, G.W., Chiarenzelli, J., Quensen, J.F., III, Hamilton, M.C. 2006. Chapter 10: Polychlorinated Biphenyls. In: Environmental Forensics: A Contaminant Specific Guide (R. Morrison and B. Murphy, eds.). Elsevier. Amsterdam. pp. 187-225.
- Katz, C.N., Chadwick, D.B., Skinner, L. 1995. Input of polynuclear aromatic hydrocarbons from San Diego Bay from creosote pier pilings. OCEANS '95: Challenges of Our Changing Global Environment, 3:1722-1729.
- Katz, C.N. 1998. Seawater polynuclear aromatic hydrocarbons and copper in San Diego Bay. Navy Technical Report 1768, April. SAR 372899.
- Larcom, B.J., Cline, J.M., Merrill, E.A., Jederberg, W.W. 1996. Risk assessment of polychlorinated biphenyls (PCBs) on-board Navy ships. US Air Force AL/OE-TR-1996-0153.
- Lenihan, H.S., Oliver, J.S., Stephenson, M.A. 1990. Changes in hard bottom communities related to boar mooring and tributyltin in San Diego Bay California USA: A natural experiment. Mar. Ecology Prog. Ser. 60:147-160.
- Moser, K. 1998. Ken Moser 3-25-98 Inspection at SWM. BAE00032008.
- OECD. 1973. Polychlorinated Biphenyls, Their Use and Control.
- OEHHA. 2006. Proposition 65 Safe Harbor Levels: No Significant Risk Levels for Carcinogens and Maximum Allowable Dose Levels for Chemicals Causing Reproductive Toxicity,

Reproductive and Cancer Hazard Assessment Branch. Office of Environmental Health Hazard Assessment. California Environmental Protection Agency.







- OEHHA. 2008. Development of fish contamination goals and advisory tissue levels for common contaminants in California sport fish: Chlordane, DDTs, Dieldrin, methylmercury, PCBs, selenium, and Toxaphene. California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Pesticide and Environmental Toxicology Branch. June 2008. <http://www.oehha.ca.gov/fish/gtlsv/pdf/FCGsATLs27June2008.pdf>.
- Ogden. 1998. Final Report Site Remediation, Marine Railway Removal Project, Southwest Marine Shipyard. December. SAR198846.
- Pease, S. 1998. Deposition testimony, NRDC vs. SWM. BAE00024057.
- Potter, T.L., Simmons, K.E. 1998. Composition of Petroleum Mixtures. Volume 2, Total Petroleum Hydrocarbon Criteria Working Group Series.
- SDMC. 1974. Application for permit to discharge – short form D. SAR37481.
- Silberhorn, E.M. 1995. PCBs. In: *Encyclopedia of Energy Technology and the Environment*. John Wiley & Sons, Inc., New York, NY, USA.
- SWM. 1989. 09-22-89 Storm Drains Spill Report. BAE00039377.
- SWM. 1991. 04-22-91 Diesel #2 spill at yard pump. BAE00083260.
- SWM. 1992a. 06-18-92 Summary of Violations Questioned by Southwest Marine. BAE00038724.
- SWM. 1992b. 05-30-92 Fuel spill into bay (diesel). BAE00029724 to BAE00029731.
- SWM. 1995. Summary of Violations Questioned by Southwest Marine. BAE00059267.
- SWM. 1998. Southwest Marine, Inc. Technical Report Section F.1(a-c), in Accordance with Order No. 97-36., NPDES Permit No. CAG039001. November 17. SAR014971.
- SWM. 1998b. Uniform Hazardous Waste Manifest, Waste PCB Gaskets. November 24. BAE00143533.
- SWRCB. 1996. Resolution No. 92-49 - Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304 (As Amended on April 21, 1994 and October 2, 1996). California Environmental Protection Agency, State Water Resources Control Board, Sacramento, CA. October 2, 1996.
- TN&A. 2006. Re: Response to Silver Gate Power Plant Storm Water Discharge Notice of Violation Number 5408. March 13.
- USEPA. 1989. Risk Assessment Guidance for Superfund. Volume I. Human Health Evaluation Manual (Part A). Interim Final.
- USEPA. 1999. Use Authorization for, and Distribution in Commerce of, Non-liquid Polychlorinated Biphenyls; Notice of Availability; Partial Reopening of Comment Period; Proposed. Rule 40 CFR Part 761.
- USEPA. 2006. National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs: Polychlorinated Biphenyls (PCBs). EPA 842-B-06-002.

Woodward Clyde. 1995. Historical Occupancy Search, Southwest Marine. Submitted to California Regional Water Quality Control Board. SAR056272.

Young, D.R., Heesen, T.C., McDermott, D.J., Smokler, P.E. 1974. Marine inputs of polychlorinated biphenyls and copper from vessel antifouling paints. Southern California Water Research Project (SCWRP-TM212-74).

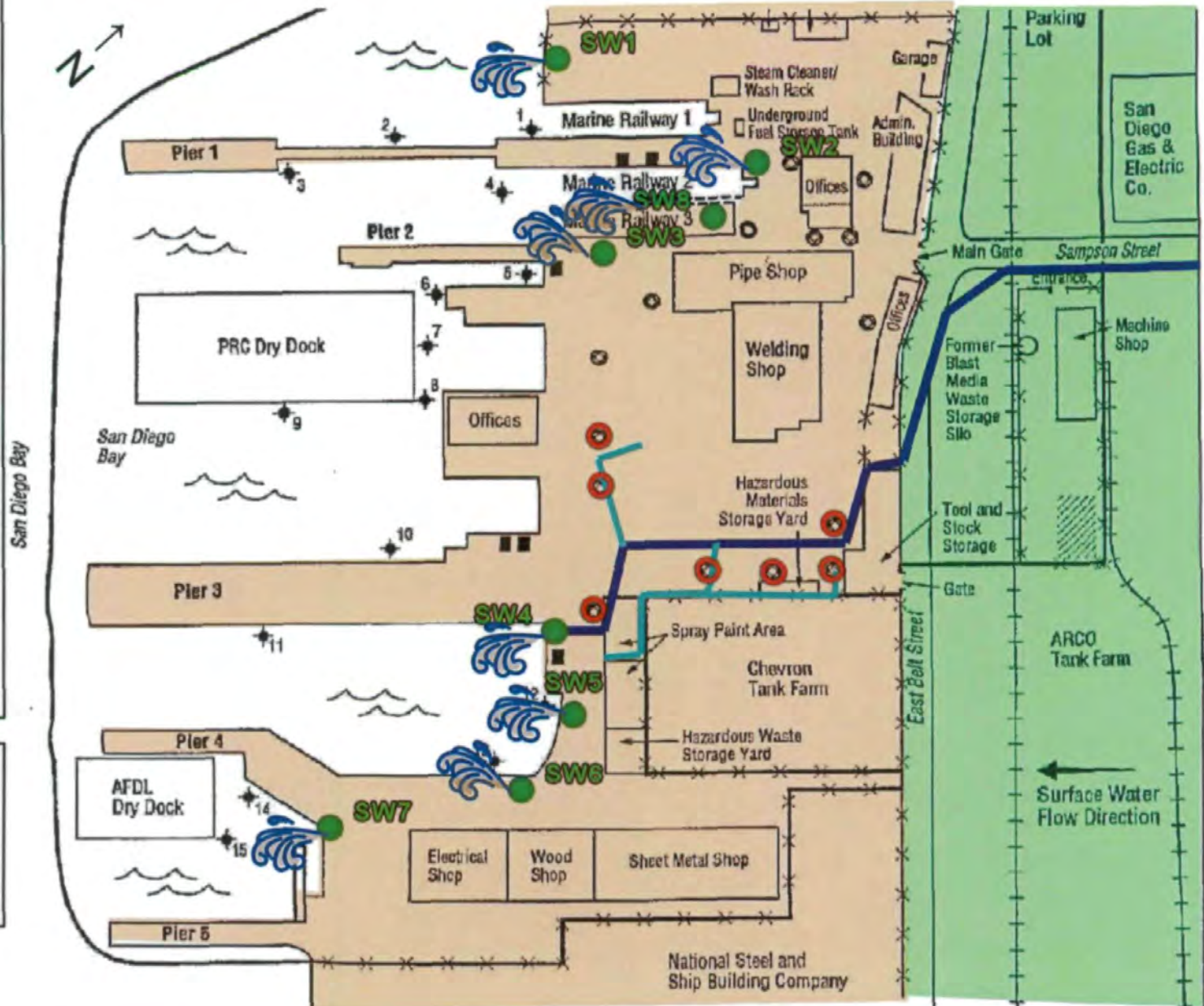
Figures

Legend

-  Stormwater outfall location
-  Shipyard surface drain inlet draining to SW4
-  Shipyard subsurface linkage to SW4 stormwater main
-  SW4 stormwater main
-  City SW4 Watershed
-  Shipyard watershed

Notes:

1. Subsurface stormwater infrastructure based on SWM (1998a).
2. Base map from Bechtel (1993).

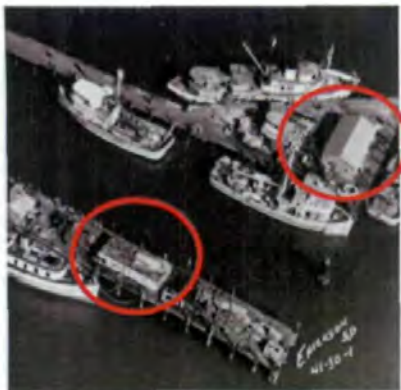


Shipyard Stormwater Infrastructure and Facility Locations

Figure

1

San Diego Shipyard Sediment Site
San Diego, California



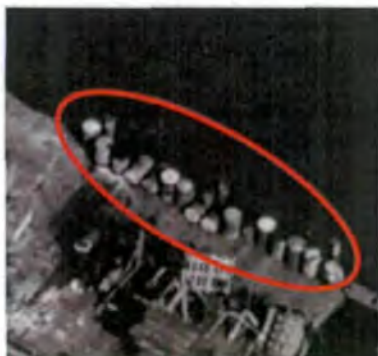
Machine and electrical shops on Piers 1 & 2 (1941; Booth et al., 2004)



Shipyard (SDMC Co.) transformer located adjacent to San Diego (mid 1950s; Booth et al., 2004)



Wastes in Pier 1 marine railways (1998; Moser, 1998).



55-gallon drums located adjacent to water on Pier 1 (1941; Booth et al., 2004)

Sandblast Material and Paint¹

- Marine railways
- Sandblasting and painting areas

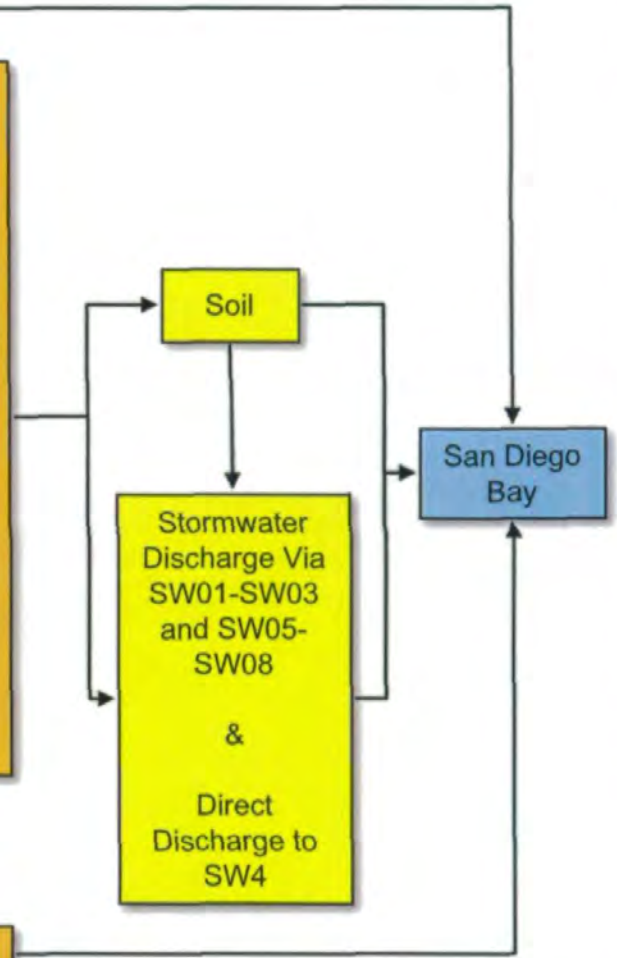
Fluids (functional fluids, oils, and dielectric fluids)²

- Equipment in marine railways and other locations such as machine shops located on piers (over water)
- Electrical infrastructure (transformers, liquid-filled cables)

Ship-related Sources³

- Ship solid materials released during repair in marine railways
- Ship bilge waters released in railways and adjacent to piers.
- Leaching of COCs from ship paints.
- Sandblasting and painting areas

Creosote in Marine Piers and Structures⁴



COCs Associated with Shipyard Sources:
 1. PCBs, TBT, Copper, and Mercury.
 2. PCBs, HPAHs.
 3. PCBs, TBT, Copper, Mercury, and HPAHs.
 4. HPAHs.



Conceptual Site Model for Shipyard COC Discharges

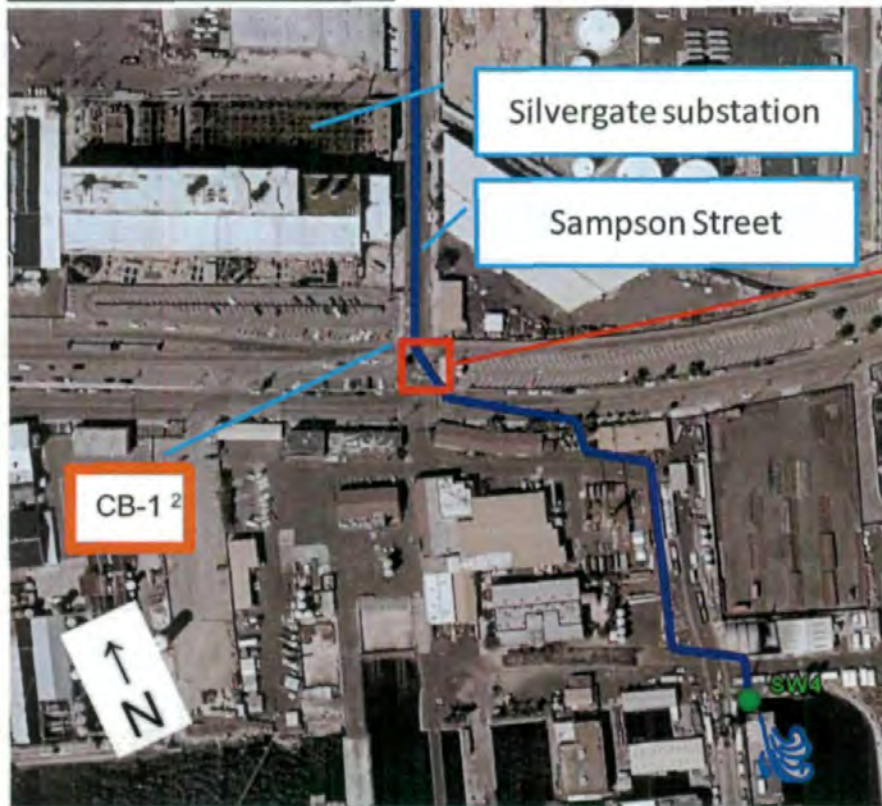
Figure 2

San Diego Shipyard Sediment Site
 San Diego, California

DATE: 6/21/2011

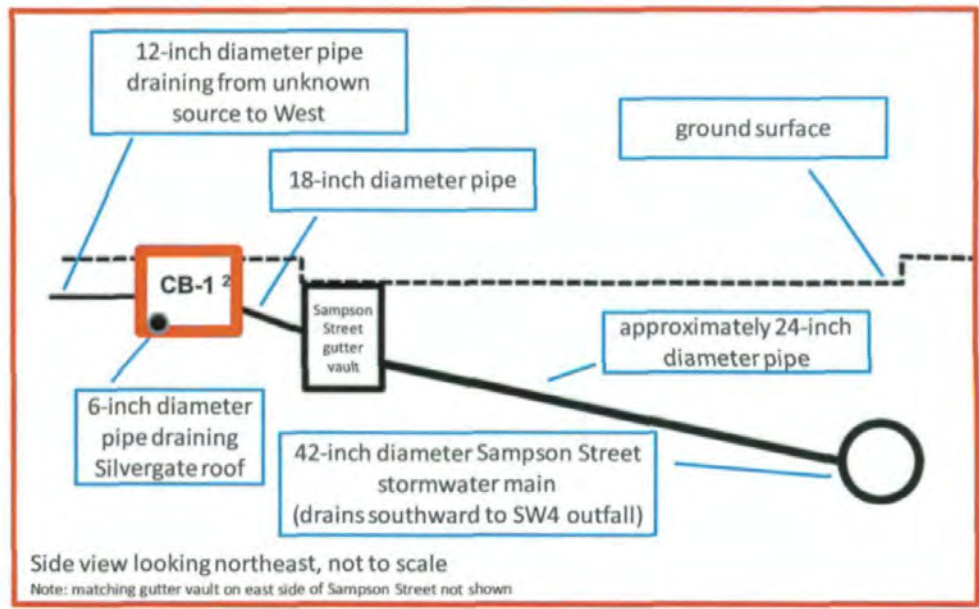
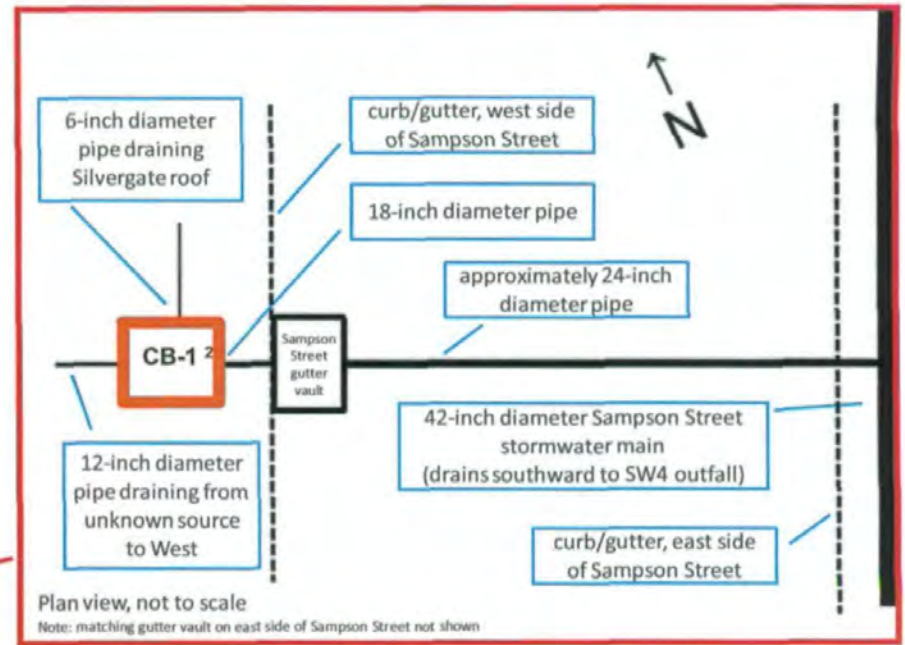
Legend

-  SW4 stormwater outfall location
-  SW4 stormwater main



Notes:

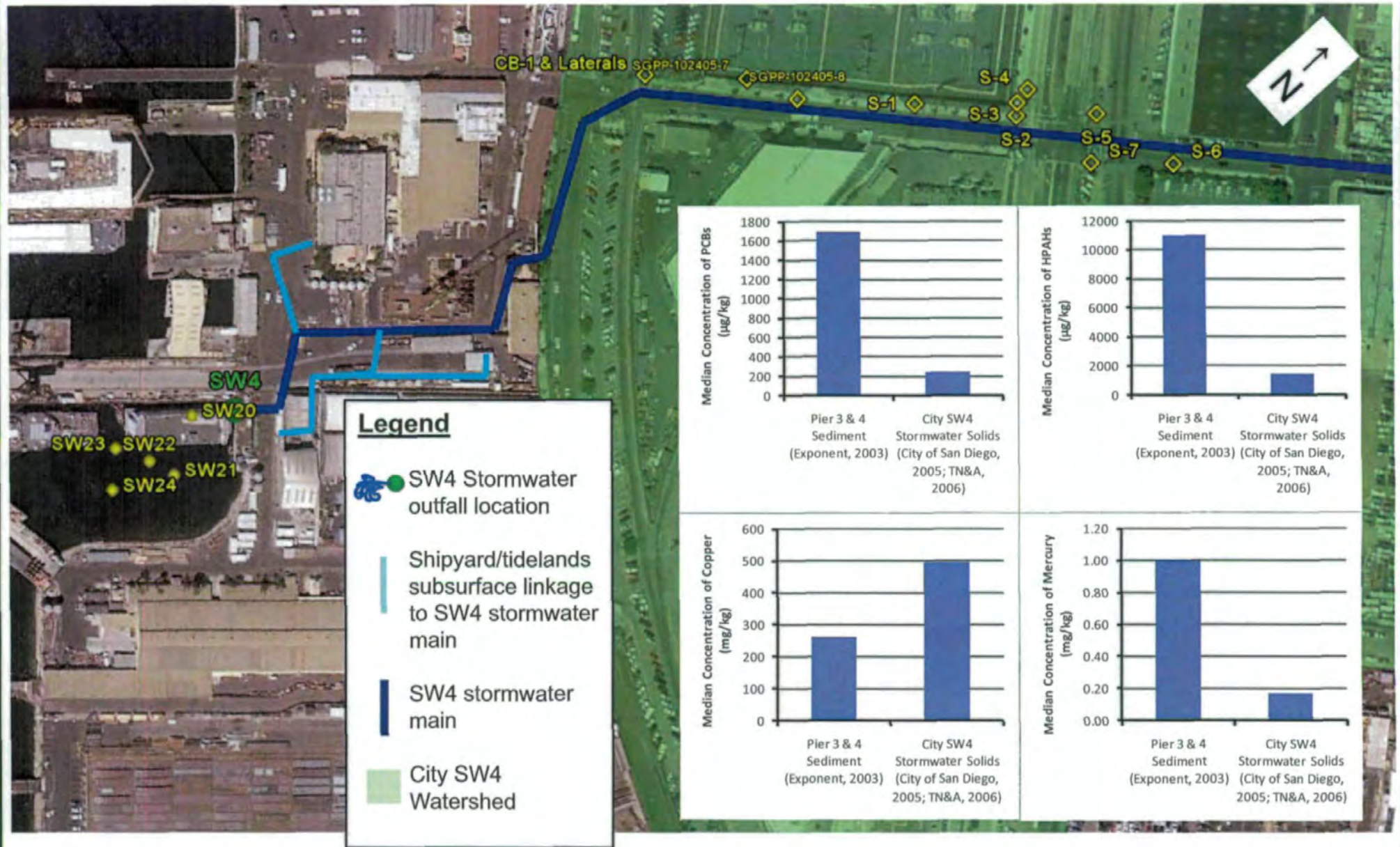
1. December 30, 2004 USGS aerial photo.
2. CB-1 is upgradient of the Sampson Street gutter vault.



Conceptual Site Model for CB-1 and Sampson Street Stormwater Drainage

San Diego Shipyard Sediment Site
San Diego, California

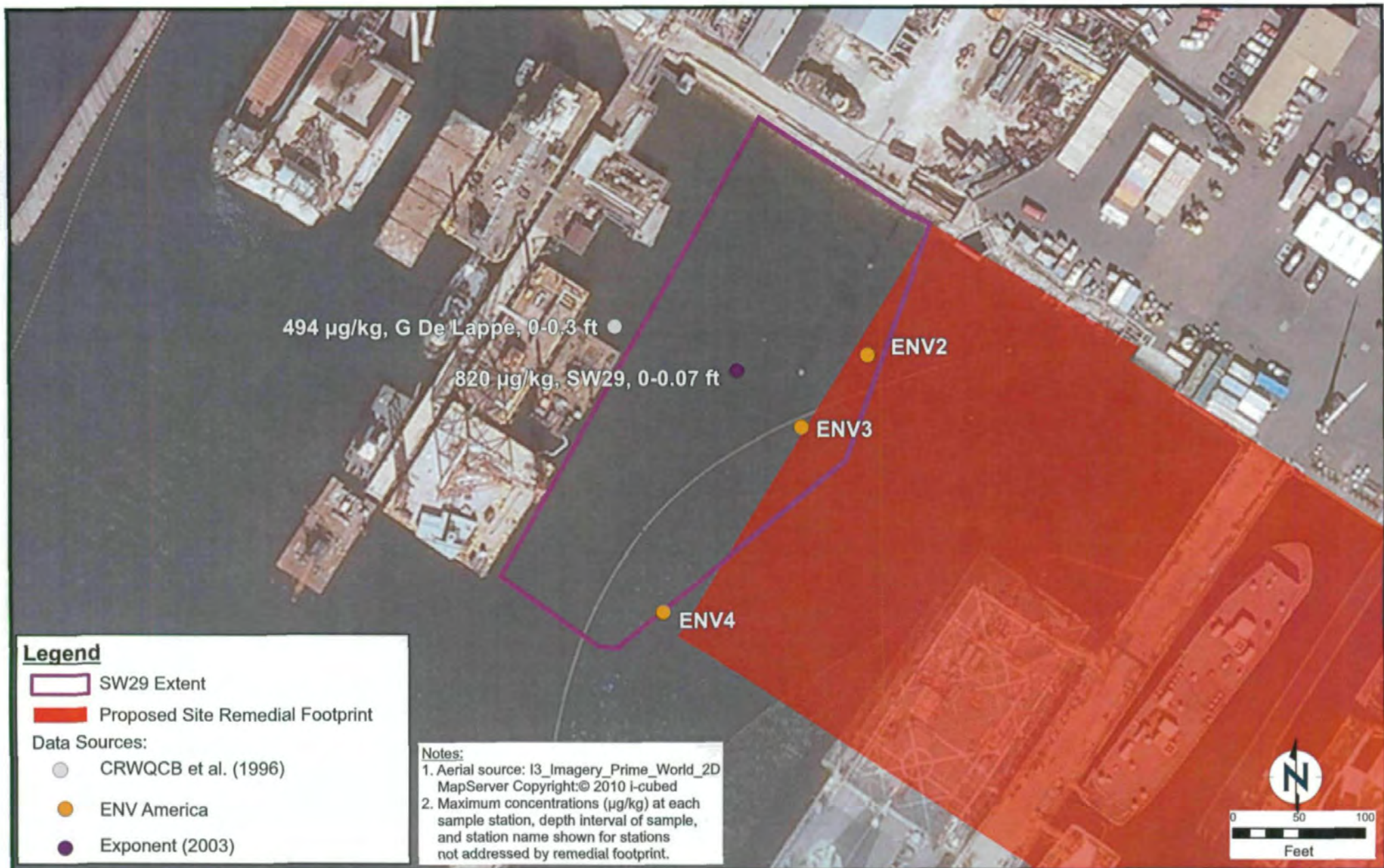
Figure
3



Concentrations of PCBs, HPAHs, Copper, and Mercury in Stormwater Solids in the City of San Diego SW4 Watershed and Pier 3 & 4 Sediment

San Diego Shipyard Sediment Site
San Diego, California

Figure
4



Maximum Concentrations of Total PCB Congeners in Surface Sediment Found in the Vicinity of SW29

San Diego Shipyard Sediment Site
San Diego, California

Figure
5