SAN DIEGO UNIFIED PORT DISTRICT'S SUBMISSION OF COMMENTS, EVIDENCE AND LEGAL ARGUMENT

TENTATIVE CLEANUP AND ABATEMENT ORDER R9-2011-0001
AND RELATED DRAFT TECHNICAL REPORT

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The San Diego Unified Port District (Port) submits the following comments, evidence and legal argument to the Tentative Cleanup and Abatement Order R9-2011-0001 (TCAO) and related Draft Technical Report (DTR). These comments are intended to be supplemental to, and incorporate, the Port's prior submissions, including the letter of April 22, 2008 from Sandi Nichols to Michael McCann and attachments (Shipyard Administrative Record [SAR] 378166-378205), as well as the letter of July 15, 2004 from David Merk to John Robertus and the attachments (SAR 158809-158824; SAR 158826-159338).

I. *Introduction*

The Port supports the Cleanup Team's (CUT) remedial footprint proposed in the TCAO and DTR. As with a number of other sites, the Port intends to continue to cooperate with the CUT's efforts at the Shipyard Sediment Site. However, neither the facts nor the authority cited in the TCAO and DTR support naming the Port as a primarily liable discharger. Specifically, the Port has cooperated, and will continue to cooperate, with the California Regional Water Quality Control Board – San Diego Region (Regional Board). Early in the process, the California State Lands Commission encouraged and directed the Port to use its unique position as landlord to urge its tenants to work with the Regional Board toward a resolution. The Port has taken this responsibility seriously and will continue to do so. Further, the Port's tenants have adequate financial resources and are cooperating with the Regional Board.

Finally, the DTR acknowledges that there is no evidence that the Port "initiated or contributed to the actual discharge of waste to the Shipyard Sediment Site." (DTR §11.2, at p. 11-4.) Likewise, there is no evidence that the Port has discharged any contaminants from its municipal separate storm sewer system (MS4) facilities. As such, the Port should not be named a primary discharger in the TCAO. For the same reasons, the Port should be deleted from the MS4 Investigation and Mitigation directives in the TCAO. (TCAO Directives 3-5, pp. 21-23.)

The Port looks forward to the adoption of the TCAO, with the removal of the Port, and the cleanup of the Shipyard Sediment Site.

II. *Port Support of the Proposed Remedial Footprint*

TCAO Finding 33 and Attachment 2

DTR §§1.2; 1.4.2.1, and 1.5.2

The Port is supportive of the proposed cleanup approach reflected in the TCAO and DTR, while reserving the right to consider any comments that may come in during the public comment period. According to Regional Board Executive Officer and CUT team head, David Gibson, this is exactly the type of support which the CUT is seeking and would expect from the Port. (Exhibit "1" [Gibson Deposition], 43:4-22.)

To illustrate this support, the Port's designated expert, Dr. Michael Johns, provides support for the proposed remedial footprint. (Exhibit "2" [Port Expert Designation]; Exhibit "3" [Dr. Johns Declaration], ¶¶8-9.) In particular, Dr. Johns agrees with the process used to identify the polygons for the remedial footprint and has concluded that the factors used to select "worst first" polygons are consistent with the findings.

Dr. Johns also agrees that the Shipyard sediment contamination has contributed to the impairment of beneficial uses in San Diego Bay and likely continues to harm human health and environmental resources. (Exhibit "3" [Dr. Johns Declaration], ¶5(a)-(d).) In this regard, Dr. Johns has concluded that the contaminants are bioaccumulating in biota relevant to human health and that exposed fish and shellfish can migrate offsite, spreading the reach of the contamination throughout the San Diego Bay and potentially to those who consume the exposed fish and shellfish. (Exhibit "3" [Dr. Johns Declaration], ¶6(a)-(d).) Likewise, the shipyard activities are

likely exposing and/or redistributing legacy contaminants that create an ongoing source of San Diego Bay contamination. (Exhibit "3" [Dr. Johns Declaration], ¶7(a)-(d).)

Additionally, the Port's experts agree that the remedial footprint can go forward without delay. While some parties may claim that the remediation cannot go forward unless the Chollas Creek outfall area is included within the remedial footprint or otherwise addressed because of recontamination concerns, the Port's designated fate and transport expert has concluded that any interim resedimentation from Chollas Creek discharges will not adversely impact the remediation efforts at the Shipyards. (Exhibit "2" [Port Expert Designation]; Exhibit "4" [Dr. Poon Declaration], ¶¶13-15.) As such, the Port supports the exclusion of the mouth of Chollas Creek from the remedial footprint as well as the decision to move forward expeditiously with the remediation.

A. Port Support During the TCAO/DTR Process

The Port also reiterates its willingness to provide appropriate support to the Regional Board in its efforts to implement the TCAO and DTR. The Port was instrumental in coordinating initial efforts to get the dischargers and interested parties into discussions and mediation to try to reach a consensus on remedial approach and scope. The Port has worked to locate and leverage dischargers' potentially applicable insurance policies that could assist in funding the remediation. The Port also made its experts available to the CUT to assist in the site assessment.

The Port remains committed to supporting the Regional Board in any appropriate manner afforded by law. The Port will continue to be engaged in any appropriate mediation process, to reach a resolution of any remediation and monitoring issues. Likewise, the Port is working with the CUT and supporting its efforts through the California Environmental Quality Act (CEQA)

process. The Port is further working with the CUT to explore options for potential disposal or dewatering sites for the dredged sediment.

B. Past and Present Port Support and Cooperation with the Regional Board

The Port is dedicated to protecting and improving the environmental conditions of San Diego Bay and the Port tidelands. The Board of Port Commissioners is committed to conducting Port operations and managing resources in an environmentally sensitive and responsible manner and ensuring that tenant operations do the same.

The Port was created by the State Legislature in 1962 to manage San Diego Bay and surrounding tidelands by balancing economic benefits, community services, environmental stewardship, and public safety. (California Harbors and Navigation Code, App. 1 [the Port Act].) The Port takes seriously its authority and responsibility to protect, preserve, and enhance San Diego Bay's physical access; natural resources, including plant and animal life; and water quality. (Port Act, §4(b).)

The Port has adopted as its mission statement the commitment to protecting the tideland resources through balancing economic benefits, community services, environmental stewardship, and public safety on behalf of the citizens of California. To this end, the Port has developed strategic goals to protect and improve the environmental conditions of San Diego Bay and surrounding tidelands. The Port currently has several programs in place to protect stormwater, reduce pollutant sources, improve air quality, and reduce air emissions. For example, the Port has established an environmental committee with the goal of promoting environmental improvement projects throughout the San Diego Bay beyond ordinary compliance obligations. (Exhibit "1" [Gibson Deposition], 56:12-57:14.) Such Port programs have positively impacted water quality in bays and harbors throughout the state.

To the extent the CUT would designate the Port as a primary discharger because of perceived non-cooperation grounded in the Port's withdrawal from a voluntary mediation process that it suggested, such a position would be an inappropriate basis for Port primary liability as a matter of law. On the contrary, the Port's commitment to the above principles is reflected its long history of cooperating with the Regional Board in efforts to remediate sites at which the Port is a landlord, some of which are listed below.

1. Campbell Shipyard

The Port provided significant assistance and leadership at another large San Diego Bay dredging project, the Campbell Shipyard site. At that site, the Port worked cooperatively with and supported the Regional Board's cleanup approach. (See, Exhibit "1" [Gibson Deposition], 28:12-24; 48:18-49:9; Exhibit "5" [Barker Deposition], Vol. III, 539:11-25.) The Port assisted in pushing the site toward mediation and assisted in securing insurance proceeds from a number of dischargers as well as its own insurance. These funds were used to finance the dredging and capping of the impacted sediments. Ultimately, the Port performed the sediment dredging and capping work. (Exhibit "6" [Carlisle Deposition], Vol. I, 119:2-6.)

2. Shelter Island Yacht Basin TMDLs

The Regional Board has been implementing copper TMDLs at the Shelter Island Yacht Basin. As David Barker acknowledged in his deposition, the Port "is working very cooperatively with the [Regional B]oard" on this matter. (Exhibit "5" [Barker Deposition], Vol. III, 543:2-8.) In particular, the Port has been working at phasing out copper-based hull paint and "taking a lead role in investigating the use of alternative vessel hull paints to curtail copper discharges into the [San Diego B]ay." (Exhibit "5" [Barker Deposition], Vol. III, 544:25-545:6.) The Port has sought grant funds to assist in the switching of hull paints and has been facilitating a discussion on this point between the Regional Board, the yacht owners and the marinas. (Exhibit "5" [Gibson Deposition], 31:20-32:15; Exhibit "5" [Barker Deposition], Vol. III, 545:7-10.) The

Port has also made financial contributions to this effort. ((Exhibit "1" [Gibson Deposition], 32: 16-23.)

3. Teledyne Ryan/Convair Lagoon

The Port has worked cooperatively with the Regional Board at the Teledyne Ryan (TDY) and Convair Lagoon sites. These sites involve a former aeronautical facility that had landside contamination impacts (the TDY site) and San Diego Bay sediment contamination impacts (the Convair Lagoon site). Again, the Port is working cooperatively with the Regional Board at this site. (Exhibit "5" [Barker Deposition], Vol. III, 540:11-20.) In fact, the Port assisted in bringing historic specialized insurance assets to help pay for demolition and remediation costs on the TDY site. Further, the Port worked aggressively with Regional Board oversight to remediate the sediment in the Convair Lagoon.

4. South Bay Power Plant

The South Bay Power Plant is a complex decommissioning and demolition project related to a power plant facility. There are related environmental issues associated with this work, including issues relating to San Diego Bay sediment. The Port has been cooperative while working with the Regional Board at the South Bay Power Plant site. (Exhibit "1" [Gibson Deposition], 30:18-31:8.) The Port is also working with other responsible agencies and parties through a very complex process to implement the demolition and related processes.

5. Former BFGoodrich South Campus

BFGoodrich is a site involving investigation and remediation in an area adjacent to the San Diego Bay. The Port is working with the Regional Board in investigating potential areas of historic contamination, including sediment contamination.

6. Tow Basin

The Tow Basin is an area adjacent to the San Diego Bay involving PCB contamination associated with a former aeronautics facility. The Port has been working cooperatively with the Regional Board to conduct the necessary investigation and remedial work pursuant to the Sediment Quality Objectives.

III. *The Port Should Not be Primarily Responsible for its Tenants' Discharges*

TCAO Finding 11

DTR §11.2

The DTR states that the Port may be named as a discharger due to its capacity as landlord of certain tenants identified as dischargers but also recognizes that "[i]n certain situations, the State Water Board has found it appropriate to consider a lessee primarily responsible and the lessor secondarily responsible for compliance with a cleanup and abatement order." (DTR, §11.2, at p. 11-4.) As the DTR further notes, while this determination requires an analysis of various factors, the general rule is "that a landowner or lessor party may be placed in a position of secondary liability where it did not cause or permit the activity that lead to the initial discharge into the environment and there is a primarily responsible party who is performing the cleanup." (*Id.*) The Port agrees with the DTR's statements of the law in this regard.

While the DTR goes on to correctly note that "there is no evidence in the record that the Port District initiated or contributed to the actual discharge of waste to the Shipyard Sediment Site" it incorrectly concludes that "it is ... appropriate to name the Port District as a discharger in the CAO to the extent the Port's tenants, past and present, have insufficient financial resources to cleanup [sic] the Shipyard Sediment Site and/or fail to comply with the order." (DTR §11.2, at p. 11-4 [citing *In the Matter of Petitions of Wenwest, Inc. et al.*, WQ 92-13, p. 9; *In the Matter of Petitions of Arthur Spitzer, et al.*, WQ 89-8, p. 21.)

The DTR acknowledges that "[i]n the event the Port District's tenants, past and present, have sufficient financial resources to clean up the Shipyard Sediment Site and comply with the Order, then the San Diego Water Board may modify its status to secondarily responsible party in the future." (DTR §11.2, at pp. 11-4 to 11-5.) This anticipated modification is appropriate and should be implemented because there is substantial evidence of the Port District's tenants' abilities to fund the Order. In the same fashion, the evidence illustrates that the Port District's tenants are complying with the Order.

A. The Port's Tenants Have Sufficient Assets to Conduct the Cleanup

TCAO Finding 11

DTR §11.2

The Port's tenants have more than sufficient assets to conduct the cleanup. In fact, prior iterations of the TCAO did not name the Port as a primary discharger because of its determination that the Port's tenants had adequate assets to conduct the cleanup and were cooperating. (SAR 375780, at 375818-375819.) Inexplicably, the latest draft of the TCAO reaches a contrary conclusion without presenting any new facts that would justify this change in position. Having acknowledged the correct legal analysis for determining whether the Port should be primarily or secondarily liable, the CUT bears an initial burden of establishing through evidence the facts necessary to conclude that the Port's tenants do not have adequate assets to fund the cleanup efforts. Yet, no such evidence has ever been presented.

In fact, the evidence establishes beyond question that the Port's tenants have adequate assets to fund the cleanup efforts. The DTR estimates the remedial cleanup and monitoring costs will total $58.1 million. (DTR §32.7.1, at p. 32-40.) During the discovery period, the Port sought and received responses from its tenants confirming that the tenants have adequate assets, whether in the form of traditional financial assets or insurance assets, to perform the cleanup. As

detailed below, the Port's current and historic tenants have more than adequate financial and insurance assets – at least $800 million. This is exclusive of the available financial and insurance assets of other dischargers such as the Navy and the City of San Diego.

Additionally, the Port's tenants have lease and permit terms obligating the tenants to defend and indemnify the Port against this type of liability. (See, e.g., SAR 159273, 159289 at ¶21 [NASSCO Lease]; Exhibit "7" [SDG&E Tidelands Use and Occupancy Permit Excerpt], p. 5, ¶10; SAR 159307, 159324 at ¶20 [Southwest Marine Lease]; Exhibit "8" [Southwest Marine Lease Amendment No. 4 Changing Name to BAE Systems San Diego Ship Repair, Inc.].) Consequently, the tenants' significant assets would be applicable to the Port's responsibility for any alleged "orphan shares" under these indemnity agreements. There is, therefore, no basis to conclude that the Port's tenants will be unable to cover the costs of remediation.

1. BAE

During the administrative discovery process, BAE stipulated that "it has the financial assets to cover any amounts of the cleanup and remedial monitoring under [the TCAO] which are premised upon BAE's established liability for the time period 1979 to the present with respect to the BAE leasehold only and that are ultimately allocated to BAE." (Exhibit "9" [BAE Stipulation].) Based on its review of BAE's insurance documents, the Port believes BAE has tens of millions of dollars of historic liability coverage that would be potentially applicable to the remediation and monitoring efforts. (Exhibit "10" [Summary of BAE Historic Liability Insurance].)

2. NASSCO

During the administrative discovery process, NASSCO stipulated that "it has the financial assets to cover the amount of the [TCAO] that are ultimately allocated to NASSCO." (Exhibit "11" [NASSCO Stipulation].) Additionally, based on its review of relevant documents,

the Port believes that NASSCO has hundreds of millions of dollars of historic liability coverage that would be potentially applicable to the remediation and monitoring efforts. (Exhibit "12" [Summary of NASSCO Historic Liability Insurance].)

3. SDG&E

During the administrative discovery process, SDG&E produced documentation of its insurance profile. Based on its review of these and other relevant documents, the Port believes that SDG&E has hundreds of millions of dollars of liability coverage that would be potentially applicable to the remediation and monitoring efforts. (Exhibit "13" [Summary of SDG&E Historic Liability Insurance].)

4. Campbell

During the administrative discovery process, Campbell produced documents regarding its insurance profile. Based on its review of these and other relevant documents, the Port believes that Campbell has tens of millions of dollars of liability coverage that would be potentially applicable to the remediation and monitoring efforts. (Exhibit "14" [Summary of Campbell Historic Liability Insurance].)

5. Star & Crescent Boat Company

Based on its review of relevant documents, the Port believes that Star & Crescent has millions of dollars of liability coverage that would be potentially applicable to the remediation and monitoring efforts. (Exhibit "15" [Summary of Star & Crescent Boat Company Historic Liability Insurance].) Additionally, Star & Crescent has stipulated that it has assets totaling between $750,000 and $1 million. (Exhibit "16" [Star & Crescent Stipulation].) Given Star & Crescent's likely limited share of liability for the Shipyard Sediment Site in comparison to the

other dischargers, the combination of insurance and financial assets eliminate any likelihood that there will be any "orphan share" assigned to the Port.

The Port is aware that the Star & Crescent entity that is currently named in the TCAO and DTR disputes its successor liability for the other predecessor entities that operated at the Shipyard Sediment Site. However, this dispute does not present the risk of significant "orphan share" liability that could potentially be assigned to the Port. Regardless of whether the current Star & Crescent entity is liable for the earlier operations at the Shipyard Sediment Site, the identified insurance assets would still apply, so long as the insured entity is named as a discharger under the TCAO and DTR. Thus, if the TCAO and DTR were amended to name all of the potentially liable entities – San Diego Marine Construction Company, Star and Crescent Boat Company and Star & Crescent Investment Co. -- the insurance assets should be available to address directly any established liability, whether or not these entities are still in existence. (See, California Insurance Code §11580(b)(2).)

B. The Port's Tenants Are Cooperative

TCAO Finding 11

DTR §11.2

In addition to possessing more than adequate financial assets to conduct the remediation, the Port's tenants are currently cooperating with the Regional Board. Although the tenants have been proposing a remedial approach that differs in some respects from the remedial approach proposed by the CUT, the process is "proceeding cooperatively." (Exhibit "5" [Barker Deposition], Vol. III, 489:20-490:14.)

IV. *There is no Evidence of Port Non-Cooperation*

In contrast to the extensive evidence provided above regarding the Port's history of prior cooperation with the Regional Board in achieving remediation of numerous environmental challenges throughout the San Diego Bay area and cooperation with the Regional Board in the specific context of this matter, the CUT has contended in its administrative discovery responses that the Port was named as a discharger because it has not cooperated with the CUT during this process.

The Port notes that the allegation of non-cooperation is not contained in the TCAO or DTR. This absence confirms that, at least as of the date of the most recent TCAO and DTR, no issue regarding the Port's cooperation existed. In fact, the concern regarding Port cooperation is not grounded in fact. When asked to identify the basis for the allegations of non-cooperation, the witnesses testified to concerns that the Port was not supporting the remedial footprint and was not going to produce witnesses to confirm this support. (Exhibit "5" [Barker Deposition], Vol. III, 520:7-21, 521:23-522:24; Exhibit "1" [Gibson Deposition], 33:9-22.) As detailed above, the Port has produced expert witnesses to support the remedial footprint. Likewise, the witnesses testified that the Port had not been supportive of efforts to locate a site for dewatering or disposal of the dredged sediments. (Exhibit "5" [Barker Deposition], Vol. III, 523:4-21.) Again, as noted above, the Port is working with the CUT to explore solutions to this issue and is working to provide appropriate support in the CEQA process. (See, Exhibit "5" [Barker Deposition], Vol. III, 527:23-529:6.)

The only other basis for the allegation of non-cooperation was the Port's decision to withdraw from the mediation process. (Exhibit "1" [Gibson Deposition], 33:9-34:10, 44:5-13; Exhibit "6" [Carlisle Deposition], 110:20-23.) However, as noted, the Port's withdrawal from a voluntary mediation process that it initially proposed is an inappropriate basis for naming the Port as a primary discharger, as a matter of law. Further, any implication that the mediation withdrawal constitutes Port non-cooperation or opposition to the TCAO process is directly

rebutted by the Port's cooperation cited above. In sum, the Port has provided and continues to provide appropriate cooperation during the TCAO process.

V. *The Port Has not Discharged Contamination from its MS4 Facilities*

TCAO Finding 11

DTR §11.3

As a secondary basis for Port designation, the TCAO and DTR allege that the Port should be named as a discharger based upon its ownership and operation of MS4 facilities that have purportedly discharged contamination. Specifically, the TCAO and DTR allege that MS4 facilities owned or operated by the Port have discharged through the SW4 and SW9 outfalls and minor storm drains. However, the evidence in the record does not support this basis for Port discharger liability.

A. The Port Does not Own or Operate SW4 or SW9

TCAO Finding 11

DTR §§11.3.1, 11.4

The DTR states that the Port "operates the following MS4 storm drains which convey urban runoff from source areas up-gradient of the Shipyard Sediment Site's property and discharge directly or indirectly into San Diego Bay within the NASSCO and BAE Systems leasehold: ... Storm Drain SW4; Storm Drain SW9." (DTR §11.3.1, at pp. 11-5 to 11-7.) Elsewhere, the DTR alleges that the Port has discharged pollutants "through its SW4 ... and SW9 MS4 conduit pipes, as well as other minor drains on its tidelands property and watershed." (DTR §11.4, at p. 11-8.)

These statements are incorrect. The Port does not own or operate the SW4 or SW9 outfall or the MS4 facilities leading to these outfalls. Rather, as the CUT has acknowledged in its administrative discovery responses, both outfalls (SW4 and SW9) and related MS4 facilities are operated by the City under an easement. (Exhibit "17" [CUT Discovery Responses Excerpts], Responses to Special Interrogatories 28, 30.) The City has similarly acknowledged that its "storm drain system enters the NASSCO leasehold at the foot to 28th Street and terminates at the southeasterly corner" where it "discharges into Chollas Creek" at the SW9 outfall. (See, SAR 158787, 158971, 158806 [2004 City Storm Water Pollution Prevention Program Report].) The City has an easement for the MS4 facilities that terminate at the SW4 outfall. (Exhibit "18" [City Easement].) Moreover, the City retained easements for "all water, sewer and drainage facilities, known or unknown" located within the tidelands when the City first conveyed the tidelands in trust to the Port. (Exhibit "19" [Conveyance].) Because there is no evidence the Port has ever owned or operated SW4 and SW9 or the MS4 facilities that lead directly to these outfalls, the Port cannot be held liable for discharges from this portion of the MS4. (Exhibit "20" ¶7 [Collacott Declaration].)

The CUT's administrative discovery responses clarify that the TCAO and DTR "do not allege that the Port District manages or operates the portion of the City of San Diego's MS4 that drains to" SW4 and SW9. (Exhibit "17" [CUT Discovery Responses Excerpts], Responses to Special Interrogatories Nos. 28, 30.) Rather, the contention is that the Port "is responsible for controlling pollutants into and from *its own MS4 system*" and that "the Port District cannot passively allow pollutants to be discharged through *its MS4* and into another Copermittees' MS4s, like the City of San Diego." (*Id.* [emphasis added].) Yet, neither the DTR nor the administrative discovery responses identify what part of the MS4 owned or operated by the Port would ultimately lead to SW4 or SW9, much less how such MS4 facilities have discharged pollutants to SW4 or SW9.

B. There is no Evidence that the Port's MS4 Facilities are Discharging Pollutants to the San Diego Bay

TCAO Finding 11

DTR §11.5

The DTR contains no evidence that Port discharges from its MS4 are contributing to the Shipyard Sediment Site contamination.

1. There is no Evidence that SW4 and SW9 are Discharging Contaminants to the Shipyard Sediment Site

TCAO Finding 11

DTR §§11.6.4, 11.6.5

The TCAO and DTR fail to provide evidentiary support for the conclusion that SW4 and SW9 have discharged contaminants to San Diego Bay and the Shipyard Sediment Site. In fact, the DTR acknowledges that "no monitoring data is available" for either SW4 or SW9. (DTR §§11.6.4, at p. 11-13 [SW4]; 11.6.5, at p. 11-15 [SW9].) In lieu of actual monitoring results, the DTR simply concludes that "it is highly probable that historical and current discharges from th[ese] outfalls have discharged" various contaminants. (*Id.*) Reliance upon assumption rather than evidence as a basis for liability is legally unsound.

In *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2010) 2011 U.S.App.LEXIS 4647, 41 Env.L.Rptr. 20109, the claimant alleged the co-permittees on an NPDES permit had discharged various pollutants in violation of the permit. (Exhibit "21" [*NRDC* Case].) The claimant argued initially that the "measured exceedances in the Watershed Rivers *ipso facto* establish Permit violations by Defendants." (*NRDC*, *supra*, at *44.) However, the Ninth Circuit noted that because "the Clean Water Act does not prohibit 'undisputed' exceedances; it prohibits 'discharges' that are *not* in compliance with the Act (which means in

compliance with the NPDES) ... responsibility for those exceedances requires proof that some entity discharged a pollutant." (*Id.*, at *44-45.)

Against this backdrop, the Ninth Circuit found that "the primary factual dispute between the parties is whether the evidence shows any *addition* of pollutants by Defendants" to the waterways. (*NRDC, supra,* at *45.) The claimant asserted that because "the monitoring stations are downstream from hundreds of miles of storm drains which have generated the pollutants being detected" it was "irrelevant which of the thousands of storm drains were the source of polluted stormwater – as holders of the Permit, Defendants bear responsibility for the detected exceedances." (*Id.*, at *46.) The Ninth Circuit found this view unsatisfactorily simplistic as it "did not enlighten the district court with sufficient evidence for certain claims and assumed it was obvious to anyone how stormwater makes its way from a parking lot in Pasadena into the MS4, through a mass-emissions station, and then to a Watershed River." (*Id.*, at *47.)

Ultimately, the Ninth Circuit found adequate evidence of discharges for two of the rivers, where mass emissions stations detecting the exceedances were located in a portion of the MS4 "owned and operated" by the defendant in question. (*NRDC, supra,* at *51-52.) In contrast with that conclusion, the Ninth Circuit found that "it is not possible to mete out responsibility for exceedances detected" in these waterways. (*Id.*, at 52.) The Ninth Circuit was "unable to identify the relationship between the MS4 and these mass-emissions stations" and noted that "it appears that both monitoring stations are located within the rivers themselves." (*Id.*) The Ninth Circuit concluded that "[i]t is highly likely, but on this record nothing more than assumption, that polluted stormwater exits the MS4 controlled by the [defendants], and flows downstream in these rivers past the mass-emissions stations." (*Id.*) However, this assumption was inadequate because the claimant was "obligated to spell out this process for the district court's consideration and to spotlight how the flow of water from an ms4 'contributed' to a water-quality exceedance detected at the Monitoring Stations." (*Id.*, at 52-53.)

Based on the foregoing, liability requires evidence the co-permittee "discharged" pollutants from an MS4 facility that the co-permittee owns or operates. Testing or monitoring taken from the affected waterway, rather than from the MS4 system, is not adequate. This is so regardless of how "probable" or "likely" the assumption that the defendant may have discharged pollutants. In the present case, there is no evidence that SW4 or SW9 discharged any pollutants. Rather, the TCAO and DTR merely assume such discharges as "highly probable" based upon monitoring results from Chollas Creek. This is indistinguishable from the inadequate approach in *National Resources Defense Council* and cannot form the basis for liability arising out of the ownership or operation of an MS4 system.

2. *There is no Evidence that the Port's MS4 Facilities are Discharging Contaminants to the Shipyard Sediment Site*

TCAO Finding 11

DTR §§11.6.4, 11.6.5

Even if there was adequate evidence that SW4 and SW9 are discharging pollutants, there are no monitoring or test results establishing that there have been discharges from the Port's MS4 facilities into the City MS4 facilities that lead to the outfalls at SW4 and SW9. *National Resources Defense Council* makes clear that there must be evidence that the specific Port MS4 facilities, not the MS4 system generally, are discharging pollutants. This is true regardless of how "probable" it is that such discharges might be taking place. Contrary to the correct legal standard, the DTR broadly and incorrectly identifies the offending Port MS4 facilities as SW4 and SW9. The DTR contains no factual analysis of any actual Port MS4 facilities, much less the content of the discharges from the Port MS4 facilities. In fact, the Port has only very limited MS4 facilities that lead to SW4 and no MS4 facilities leading to SW9.

Furthermore, the Port's status as co-permittee under the NPDES permit since 1990 does not make it liable for any and all discharges from SW4 and SW9, regardless of whether the

Port's MS4 facilities discharged pollutants. Likewise, the Port is not broadly liable under the NPDES permit for its tenants' discharges into a portion of the MS4 system that the Port does not own or operate. There is no language in the NPDES permit that purports to impose such broad joint liability upon the Port. Such an interpretation of the NPDES permit would be contrary to the terms of the Clean Water Act, which is the basis for the NPDES permit. Under the Clean Water Act, a "co-permittee" is defined as "a permittee to an NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator." (40 Code of Federal Regulations §122.26(b)(1).) This is further reflected in the analysis in *National Resources Defense Council,* in which the Ninth Circuit focused on and required evidence of discharges from specific MS4 facilities owned and operated by the defendants, not from the MS4 system generally.

In sum, the Port is responsible only for discharges from MS4 facilities that it owns or operates. The Port's status as co-permittee under the NPDES permit does not support the conclusion that the Port owns or operates the entire MS4 system. Likewise, the Port's status as trustee of tidelands property does not support the conclusion that the Port owns or operates all MS4 facilities located on that property. In the absence of evidence linking discharges of pollutants from a specific portion of the MS4 system that the Port owns or operates, the Port is not responsible under the NPDES permit for those discharges.

3. There is no Evidence that SW9 Discharges are Contaminating the Shipyard Sediment Site

TCAO Finding 11

DTR §§11.6.5

Finally, even if SW9 was discharging some contaminants, this would not be a proper basis of liability. The SW9 outfall discharges at the southeasterly corner of the NASSCO leasehold into Chollas Creek, which is outside the proposed remedial footprint. The Port's

designated expert, Dr. Ying Poon, has done an extensive fate and transport modeling analysis and confirmed that any discharges from Chollas Creek would not result in any significant deposit, accumulation or resedimentation of the Shipyard Sediment Site. (Exhibit "2" [Port Expert Designation]; Exhibit "4" [Dr. Poon Declaration], ¶¶13-15) This extensive modeling contradicts the assumption in the TCAO that, based upon the erroneous Exponent Report approach, Chollas Creek flows result in the settling of contaminated sediment at the Shipyard Sediment Site. In the absence of any substantial evidence that SW9 discharges are transporting contaminants to the Shipyard Sediment Site, the Port cannot be liable based upon these alleged discharges.

VI. *Conclusion*

The Port is supportive of the CUT's presently proposed remedial approach, as reflected in the TCAO and DTR. The proposed remedial footprint is both necessary to achieve water quality objectives and is designed to accomplish these objectives. The Port intends to continue working cooperatively with the CUT and the Regional Board toward the remediation of the San Diego Bay, as it has done and continues to do at many other sites.

However, the Port should not face primary responsibility as a discharger. The TCAO acknowledges that the Port has not initiated or contributed the actual discharge of waste to the Shipyard Sediment Site. The Port's discharger tenants are financially able to perform the proposed remediation and monitoring. Likewise, the discharger tenants are cooperating with the CUT and the Regional Board. Therefore, under well-established State Water Board legal authority and the evidence presented in the TCAO and DTR, the Port should only be secondarily liable, at most.

There is also no evidentiary support for the conclusion that the Port should be responsible for MS4 discharges from SW4 and SW9. The CUT and the City have both acknowledged that the Port does not own or operate SW4 or SW9 or the MS4 facilities leading directly to these outfalls. The Port owns and operates only limited MS4 facilities in the area, and there is no evidence that these facilities are discharging pollutants to SW4 or SW9. Additionally, the Port's fate and transport modeling confirms that the SW9 discharges to Chollas Creek, which is outside the TCAO's proposed remedial footprint, are not contaminating the Shipyard Sediment Site. For all these reasons, the Port should not be named as a primary discharger in the TCAO and should also be deleted from the MS4 Investigation and Mitigation directives in the TCAO. The Port looks forward to the adoption of the TCAO, with the Port removed, and the cleanup of the Shipyard Sediment Site in accordance with the law.

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

In re Tentative Cleanup and Abatement Order No. R9-2011-0001 (formerly No. R9-2010-0002) (Shipyard Sediment Site)	**DECLARATION OF SCOTT E. PATTERSON IN SUPPORT OF THE SAN DIEGO UNIFIED PORT DISTRICT'S SUBMISSION OF COMMENTS, EVIDENCE AND LEGAL ARGUMENT** Presiding Officer: Grant Destache

I, Scott E. Patterson, declare:

1. I am an attorney at law, duly admitted to practice before the courts of this state, and am a partner with the law firm of Brown & Winters, attorneys of record for the SAN DIEGO UNIFIED PORT DISTRICT in the above-referenced matter.

2. I have personal knowledge of all the matters stated herein and, if called as a witness, I could competently testify thereto, except as to those matters stated upon information and belief, and as to those matters, I believe them to be true.

3. Attached as "Exhibit 1" is a true and correct copy of excerpts from the Deposition of California Regional Water Quality Control Board Cleanup Team Member, David Gibson, dated March 11, 2011.

4. Attached as Exhibit "2" is a true and correct copy of an excerpt from the San Diego Unified Port District's Designation of Expert and Non-Expert Witnesses, dated January 18, 2011.

5. Attached as "Exhibit 5" is a true and correct copy of excerpts from Volume III of the Deposition of California Regional Water Quality Control Board Cleanup Team Member, David Barker, dated March 3, 2011.

6. Attached as "Exhibit 6" is a true and correct copy of excerpts from Volume I of the Deposition of California Regional Water Quality Control Board Cleanup Team Member, Craig Carlisle, dated February 9, 2011.

7. Attached as "Exhibit 7" is a true and correct copy of an excerpt from the Tideland Use and Occupancy Permit between SDG&E and the San Diego Unified Port District, dated June 2, 2005.

8. Attached as "Exhibit 8" is a true and correct copy of the Amendment No. 4 to Lease between BAE Systems San Diego Ship Repair, Inc. and the San Diego Unified Port District, dated June 9, 2009.

9. Attached as "Exhibit 9" is a true and correct copy of the Stipulation Regarding Resolution of Discovery Dispute, dated March 9, 2011, between BAE Systems San Diego Ship Repair, Inc. and the San Diego Unified Port District.

10. Attached as "Exhibit 11" is a true and correct copy of the Stipulation Regarding Resolution of Discovery Dispute, dated March 3, 2011, between National Steel and Shipbuilding Company and the San Diego Unified Port District.

11. Attached as "Exhibit 16" is a true and correct copy of the Stipulation Regarding Resolution of Discovery Dispute, dated May 17, 2011, between Star & Crescent Boat Company and the San Diego Unified Port District.

12. Attached as "Exhibit 17" is a true and correct copy of the Cleanup Team responses to the San Diego Unified Port District's Special Interrogatories Nos. 28 and 30, dated January 5, 2010.

13. Attached as "Exhibit 18" is a true and correct copy of the Drainage Easement between the City of San Diego and the San Diego Unified Port District, dated April 24, 1985.

14. Attached as "Exhibit 19" is a true and correct copy of the Conveyance between the City of San Diego and the San Diego Unified Port District, dated February 15, 1963.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration was executed this 26th day of May 2011, at Cardiff- by-the-Sea, California.

Scott E. Patterson

EXHIBIT NO. "1"

Excerpts from the Deposition of California Regional Water Quality Control Board Cleanup Team Member, David Gibson, dated March 11, 2011

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

IN THE MATTER OF:)
)
TENTATIVE CLEANUP AND ABATEMENT)
ORDER NO. R9-2011-0001)
)
)
)

DEPOSITION OF DAVID GIBSON

San Diego, California

MARCH 11, 2011

REPORTED BY BRIDGET L. MASTROBATTISTA

REGISTERED MERIT REPORTER, CSR NO. 7715

EXAMINATION

BY MR. BROWN:

Q Good morning, Mr. Gibson.

My name is Bill Brown. I represent the Port of San Diego in this matter, and we have a few short questions for you today. One of the allegations against the Port in some Interrogatory Answers is that the Port has not been cooperative as a landlord at this site. I wanted to ask you about this site as well as a few others and talk about cooperation.

I'm going to start out talking about some of the other sites that you may have knowledge of. Were you involved in the Campbell Shipyard site? Not the Campbell site here, but the other Campbell site where the new Hilton Hotel is?

A No, I was not.

Q Okay. Did you have any knowledge as to whether the Port was cooperative at that site?

A I believe that they were cooperative. And I do want to revise that answer. I think I was involved with the revision of the waste discharge requirements after they were initially adopted for the purposes of that site. I was the supervisor of Datquach. And I think it was the comparable sites that we presented to the board.

Q Do you know how much money the Port of

discussions in the hallway with staff working on that.

Q Have you worked with anybody at the Port of San Diego on that matter?

A I have not.

Q Do you know if the Port of San Diego contributed to the payment for that remediation?

A I don't know.

Q Okay. Do you know if the Port of San Diego assisted in bringing parties to the table to pay for that remediation?

A I don't know.

Q Do you know if the Port of San Diego initiated mediation to resolve that site?

A I don't know.

Q Do you know whether they located insurance for other parties for that site?

A I don't know that.

Q Are you involved in South Bay power plant?

A I've been involved in that, yes.

Q And what's your role in that?

A As Executive Officer, I oversaw the staff presentations and the development of those presentations in the several items that the Board had on that in 2009 and 2010.

Q Have you worked with anybody at the Port of

San Diego on that matter?

A I have not.

Q Do you know whether the Port of San Diego has been cooperative in that matter?

A It's my sense from the briefing I've received from staff that the Port has been cooperative, and I look forward to more of that cooperation in the next year ahead.

Q I think we're all going to need it.

Did you ever work on the site known as Goodrich or the site in Chula Vista also known as Rohr Industries?

A I did not work on it. I've been briefed on it.

Q Have you ever worked with anybody at the Port of San Diego on that matter?

A I've not.

Q Do you know whether the Port of San Diego has spent money on remediating that site?

A I don't believe I've been briefed on that, no.

Q Have you worked on the Shelter Island Yacht Basin?

A I have worked on that, yes.

Q And have you worked with representatives of the Port on that matter?

A Yes, I have.

Q And who did you work with?

A I have worked primarily with David Merk and Karen Holman on that subject.

Q And what have they been doing?

A In short, they have been implementing the TMDL with the yacht owners in that basin vis-a-vis seeking grant funds which the Regional Board supported from the 319(h) Federal Clean Water Act Nonpoint Source grant program to switch over boats from copper-based antifouling coatings to non-copper-based and preferably a nontoxic alternative.

We supported their grant application. They have been facilitating communications with the yacht owners and the marinas in that yacht basin, and we appreciate that help.

Q Do you know whether the Port has also, aside from the grant, contributed financially to that program?

A I believe that they have. There's a matching requirement for that grant. And, even in advance of that, the Port's commitment to applying for the grant and working with the yacht owners and marina owners there include that. And I believe that there was also monitoring associated that the Port has done.

Q Have you worked with the Port on any other matters involving sediment in San Diego Bay?

A No, I've not.

Q In regard to the NASSCO matter, have you had interaction with Port representatives on that site or what we'll call the shipyard site?

A In mediation, yes.

Q Outside of mediation, have you had dealings with Port representatives?

A No.

Q Can you characterize the -- do you have any knowledge as to whether the Port has been uncooperative in that matter?

A Yes.

Q And what knowledge do you have?

A As I recall, and as I've been briefed, beginning in January of 2010 the Port's perspective seemed to change on that. The Port had the opportunity in midyear to identify witnesses, to designate witnesses to support the cleanup order. And the Port allowed that opportunity to pass.

The Regional Board's staff's access to the Port experts was withdrawn, and the Port's position seemed to be one of adversarial.

Q How did you learn that the Port had withdrawn its expert witnesses?

A I was --

Q If you learned this from your attorney, you shouldn't repeat it to me. If you learned it from anybody else, you're free to let me know.

MR. CARRIGAN: Or if it's a matter of public record. For example, documents that may have been filed or not filed. Go ahead.

THE WITNESS: There's a document in the Administrative Record, a letter dated February, 2010, from the Port to Timothy Gallaher, withdrawing from the mediation.

BY MR. BROWN:

Q Is that the same as saying that you couldn't have access to their experts?

A No. But, subsequent to that, access to their experts was denied the Regional Board.

Q And who denied that access?

A I don't know specifically who on the Port denied that access. This is what I was informed by the staff.

Q Okay. Do you recall who at the staff informed you of that?

A Mr. Barker and Mr. Carlisle.

Q Okay. Do you know if the Port has designated any experts in this proceeding subsequently?

A I believe that they have. Yes.

BY MR. BROWN:

Q Okay. Going back to the lack of support for the plan.

What is it that you're looking for in the way of support from any of the parties? What would be an indicator of support?

A The simplest sort of support would be a statement before the Board that they do, in fact, support the draft cleanup and order in principle. They may certainly wish to have the Board consider alternatives or changes to it; but I have not heard a statement yet that they are, in fact, supportive of the cleanup approach and the Cleanup Order itself.

Q Would it be supportive if they were to -- if the Port were to support it in principle, but reserve the right to consider the comments that would come in during the public comments period?

A Yes, I believe --

MR. CARRIGAN: Incomplete hypothetical. Calls for speculation.

Go ahead.

THE WITNESS: Yes, I would agree.

MR. CARRIGAN: Just pause briefly. Allow me to babble.

BY MR. BROWN:

Q And to modify your testimony -- no, that's not true. Mr. Carrigan has been very gracious throughout these proceedings.

Let me ask you about: Aside from the items that we have discussed, are you aware of any other indicators of noncooperation by the Port?

A No.

Q At Mr. Carlisle's deposition he testified that withdrawal from the mediation was a factor in as to why the Port was named on the order.

Do you disagree with his characterization?

A I don't disagree with his characterization.

Q Were you involved in the decision to name the Port on the next -- the current pending TCAO?

A Yes, I was.

Q And what role did you play?

A I was presented with the alternatives by Mr. Barker and Mr. Carlisle, and I consulted with counsel and agreed to support their recommendation that the Port be added as a primary responsible party.

Q And did both of those individuals make that recommendation?

A It was a group consensus of the Cleanup Team.

Q And who had the ultimate opinion?

A I believe it was not.

Q At the Goodrich facility, do you know whether the Port accessed its insurance?

A That was not included in my briefing, so I don't know.

Q At the NASSCO facility, do you know whether the Port accessed its insurance?

A I don't know.

Q Do you know if it did so prior to being named as a primary responsible party?

A No, I don't know that.

Q Do you know if the Port researched and located the insurance assets of the other responsible parties?

A I don't know that.

Q Do you know whether they did that before they were named as a primary responsible party?

A I don't know that.

Q Do you know if the Campbell site was resolved through mediation?

A I don't believe that it was. That was before my time, and I wasn't involved in that case; and I've not researched the history of it, so I don't know.

Q Were you involved in the events leading up to the mediation in this case?

A I came in just as the mediation was about to

begin.

Q What were you told at the time that the mediation was commenced as to what the Port's role was?

MR. CARRIGAN: Hearsay.

THE WITNESS: I was --

MR. CARRIGAN: Go ahead.

THE WITNESS: I was told that the Port was generally supportive of the cleanup approach by the Board up to that point.

BY MR. BROWN:

Q Were you told whether the Port was the instigator of the mediation?

A No, I was not told that.

Q Were you told whether the Port selected or assisted in the selection of the same mediator who had resolved the Campbell matter?

A I wasn't told that, though I had heard from the staff that he had been involved in other cases in San Diego Bay.

Q Do you know if the approach was advocated because it was the successful approach that was used in the Campbell matter?

MR. CARRIGAN: Lacks foundation. Calls for speculation.

BY MR. BROWN:

air quality and truck traffic in Barrio Logan?

A I'm not specifically aware.

Q Okay. Are you aware of any of the greenhouse gas issues regarding truck traffic in Barrio Logan?

A I'm aware of the greenhouse gas issue, truck traffic in general, but not specifically with regard to Barrio Logan.

Q Okay. I think I have just one -- well, I have one last question and one line of questioning in this area. Then I'm going to ask you briefly about sediment quality objectives.

Have you ever appeared -- have you ever participated on the Port's Environmental Committee?

A I have indeed. I've participated on the Environmental Advisory Committee of the Port.

Q And when was that time frame?

A It was in at least 2007, 2008. Thereafter, I delegated that duty to other parties. I've been at a couple of the meetings in the last year.

Q What are the activities of the Port Environmental Committee in general?

A As I was involved with it in 2006 or 2007. I'm not exactly sure of the date. It was at the beginning stages of preparing guidelines for the distribution of funds, about $10 million worth, that the Port had set

aside for environmental improvement projects around the Bay. Everything from building raptor nests, structures, to restoration, to education -- watershed education.

I helped advise the Port's staff on a competitive and thorough review of the competing proposals so that they could be scored fairly with one another. I participated in general discussions on those.

Q Would you view the Port's Environmental Committee and its creation of this fund as being beyond compliance with the Port's environmental duties?

A Yes. In fact, one of the central tenets of those, distribution of those funds, was that it could not be for compliance.

Q And are you aware of how the fund was created?

A I don't remember now.

Q Were you ever informed that it was created out of the litigation and insurance strategy that the Port had employed successfully on Bay cleanups throughout San Diego Bay?

A I recall something to that effect at the time, but I didn't know the particulars and don't remember them now.

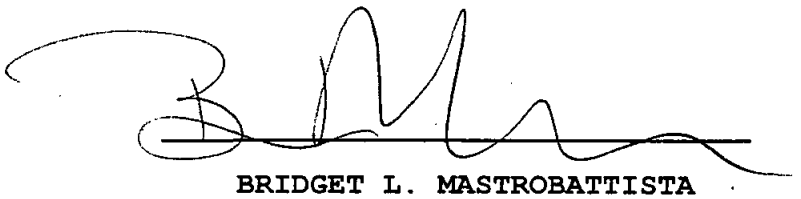
Q Are you aware of whether that same strategy was being employed and is still being employed by the Port

C E R T I F I C A T E

I, BRIDGET L. MASTROBATTISTA, Certified Shorthand Reporter for the State of California, do hereby certify:

That the witness in the foregoing deposition was by me first duly sworn to testify to the truth, the whole truth and nothing but the truth in the foregoing cause; that the deposition was taken by me in machine shorthand and later transcribed into typewriting, under my direction, and that the foregoing contains a true record of the testimony of the witness.

Dated: This 13th day of April, 2011, at San Diego, California.



BRIDGET L. MASTROBATTISTA

C.S.R. NO. 7715, RPR, RMR

EXHIBIT NO. "2"

Excerpt from the San Diego Unified Port District's Designation of Expert and Non-Expert Witnesses, dated January 18, 2011

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Attorneys for Designated Party
SAN DIEGO UNIFIED PORT DISTRICT

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

IN THE MATTER OF TENTATIVE CLEANUP AND ABATEMENT ORDER NO. R9-2011-0001 (formerly R9-2010-0002) (SHIPYARD SEDIMENT CLEANUP)	**SAN DIEGO UNIFIED PORT DISTRICT'S DESIGNATION OF EXPERT AND NON-EXPERT WITNESSES**

I. Expert Witnesses

San Diego Unified Port District ("PORT") hereby designates the following expert witnesses pursuant to the Order Issuing Final Discovery Plan for Tentative Cleanup and Abatement Order No. R9-2011-0001, the Tentative Cleanup and Abatement Order No. R9-2011-0001 ("TCAO") and Associated Draft Technical Report ("DTR"), and California Code of Civil Procedure section 2034.010 *et seq.*:

1. Ying Poon, D. Sc., P.E.
   Everest International Consultants, Inc.
   444 West Ocean Blvd., Suite 1104
   Long Beach, CA 90802
2. Robert Collacott, MBA, M.S.
   URS Corporation
   2020 East First Street, Suite 400
   Santa Ana, CA 92705
3. Michael D. Johns, MBA, M.S., PhD
   Windward Environmental
   200 West Mercer Street, Suite 401
   Seattle, WA 98119-3958

The qualifications and brief narrative statements of the general substance of the testimony these experts are expected to give are contained in the following Declaration of Wentzelee Botha.

PORT hereby expressly reserves the right to add, modify, or delete any expert from this list of expert witnesses, and to submit supplemental lists of expert witnesses as provided by the California Code of Civil Procedure. PORT reserves the right to consult with and retain any other expert witness in the capacity of an impeaching or rebuttal witness pursuant to California Code of Civil Procedure section 2034.310(b).

PORT reserves the right to call any expert witness either presently or later identified by any other party to this proceeding, although not specifically retained by PORT. In the event that any additional analyses are obtained by any other party prior to the hearing, PORT reserves the right to call as an expert witness the professional performing any such

analyses. PORT further reserves the right to call any expert witness regarding any issues arising in this matter relating to the California Environmental Quality Act ("CEQA").

If any of the witnesses discussed or listed above are not available at the time of trial, PORT hereby advises all parties that it will seek the introduction of competent testimony, including deposition testimony of such witnesses, in lieu of their live testimony.

II. Non-Expert Witnesses

PORT, by this pleading, also designates the following non-expert witnesses in this matter, who may offer percipient testimony on PORT's behalf at the hearing on this matter:

1. Jeff Gabriel, Assistant Director of Maritime Properties
   San Diego Unified Port District
   P.O. Box 120488
   San Diego, CA 92112-0488
2. Bill Hays, Senior Environmental Specialist
   San Diego Unified Port District
   P.O. Box 120488
   San Diego, CA 92112-0488

PORT hereby expressly reserves its right to name or call any additional percipient witnesses as the need may arise. PORT further reserves the right to withdraw any non-expert witness designated expressly or by reference herein.

PORT expressly reserves its right to call any percipient witness either presently or later identified by any other Dischargers named in the tentative or final Cleanup and Abatement Order(s) in this matter, although not specifically named as a witness herein by PORT, regardless of whether such other Dischargers remain as such at the time of hearing.

Dated: January 18, 2011

BROWN & WINTERS, LLP

By: Wentzelee Botha

William D. Brown, Esq.
Wentzelee Botha, Esq.
Attorneys for Designated Party
SAN DIEGO UNIFIED PORT DISTRICT

DECLARATION OF WENTZELEE BOTHA

I, Wentzelee Botha, declare as follows:

1. I am an attorney licensed to practice in the State of California and a partner with Brown & Winters, LLP, the law firm of record for Designated Party San Diego Unified Port District ("Port") in this matter. I make this declaration based on personal knowledge and, if called as a witness, I could competently testify thereto.

2. The following expert witnesses have been retained by the Port:

3. Ying Poon

a. Qualifications: Dr. Poon is responsible for managing and directing coastal and hydraulic engineering projects and has over 20 years of professional experience with coastal and hydraulic engineering studies and design projects. Dr. Poon is an expert in the application of numerical and physical models in solving complex water resources planning, coastal processes, and harbor engineering projects. Dr. Poon has developed and applied the most up-to-date numerical models on various wetland, coastal, and port development projects. He has also developed and used a wide range of hydrodynamic and water quality models, analyzed tidal inlet stability, and modeled wave transformation and wave-structure interactions. In addition, Dr. Poon is experienced in statistical modeling, spectral analysis, physical model design and interpretation of model results, as well as field investigation. He has directed numerous two- and three-dimensional physical model tests and has also directed several extensive wind, wave, current, and ship motion field data collection programs in California and China. A copy of Dr. Poon's resume is attached as Exhibit A.

b. Substance of Testimony: Dr. Poon will testify regarding the hydrodynamic and sediment transport conditions for the Shipyard Sediment Site, including but not limited to Chollas Creek.

c. Readiness: Dr. Poon has agreed to testify in this matter, and will be sufficiently familiar with the pending action to submit to a meaningful oral deposition concerning his expected testimony.

d. Fees for Testimony: Dr. Poon's fee for testimony is $300 per hour.

4. Robert Collacott

a. Qualifications: Mr. Collacott is a Principal Scientist with URS Corporation and has 31 years experience covering a broad range of environmental programs related to permitting stormwater and wastewater discharges. As Manager of Water Resources Management and Permitting for the Santa Ana office, Mr. Collacott is responsible for directing projects involving stormwater and wastewater discharge permitting, surface water quality management and planning, and regulatory compliance plan development and implementation. His experience includes stormwater discharger permitting, stormwater quality planning and monitoring, hydrologic monitoring, water resources management, solid waste management, and regulatory compliance. A copy of Mr. Collacott's resume is attached as Exhibit B.

b. Substance of Testimony: Mr. Collacott will be providing his evaluation of the discharges from the municipal separate storm sewer system (MS4) to the Shipyard Sediment Site. This evaluation will include an assessment of the Port's compliance with the requirements of the San Diego County Phase I National Pollutant Discharge Elimination System (NPDES) MS4 permit. In addition, he will identify other sources that may discharge Chemicals of Concern (COCs) in stormwater runoff to the Shipyard Sediment Site and whether evidence exists that discharges directly from the Port contributed to the contamination of the sediments at the Site.

c. Readiness: Mr. Collacott has agreed to testify in this matter, and will be sufficiently familiar with the pending action to submit to a meaningful oral deposition concerning his expected testimony.

d. Fees for Testimony: Mr. Collacott's fee for testimony is $220 per hour.

5. Michael D. Johns

a. Qualifications: Dr. Johns is a Partner at Windward Environmental, LLC, and an aquatic scientist specializing in aquatic ecological and human health risk assessments, and natural resource damage assessments (NRDA), particularly those associated with contaminated sediment. Experience gained during his 30 years of professional experience at sites located throughout the United States has provided Dr. Johns with a broad knowledge base on issues pertaining to the effects of toxic pollutants on aquatic organisms. In addition to serving as a project manager and program manager on a number of large multi-task, multi-disciplinary environmental investigations, he has served in an advisory and advocacy capacity for a number of clients in support of regulatory review and reform, review and comment on pending legislation, liability management, negotiations with state and federal environmental regulatory agencies, and as a testifying expert in litigation in both state and federal courts. A copy of Dr. Johns' resume is attached as Exhibit C.

b. Substance of Testimony: Dr. Johns will testify in regard to methods used in the TCAO and DTR by the San Diego Regional Water Quality Control Board (SDRWQCB) to define impacts to aquatic biota and human health associated with exposure to contaminants detected at the Shipyard Sediment Site. Dr. Johns may additionally testify regarding impacts to beneficial uses associated with current environmental conditions at the Shipyard Sediment Site, and improvements in the protection of beneficial uses associated with proposed cleanup actions presented in the current

version of the TCAO. Further testimony may include approaches for translating information on impacts to aquatic biota and human health into remedial actions, including developing of a cleanup footprint and utility of remedial technologies. Dr. Johns may also opine regarding design and implementation of post-remediation and long-term monitoring programs.

c. Readiness: Dr. Johns has agreed to testify in this matter, and will be sufficiently familiar with the pending action to submit to a meaningful oral deposition concerning his expected testimony.

d. Fees for Testimony: Dr. Johns' fee for testimony is $200 per hour.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on January 18, 2011.

Wentzelee Botha
Attorney for Designated Party
SAN DIEGO UNIFIED PORT DISTRICT

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

In re Tentative Cleanup and Abatement Order No. R9-2011-0001	**PROOF OF ELECTRONIC SERVICE** Presiding Officer: David A. King

I am at least 18 years old and not a party to this action. My business address is 120 Birmingham Drive, Suite 110, Cardiff-by-the-Sea, CA 92007. My electronic notification address is jday@brownandwinters.com.

I electronically served the following documents:

SAN DIEGO UNIFIED PORT DISTRICT'S DESIGNATION OR EXPERT AND NON-EXPERT WITNESSES

I electronically served the documents listed in the Attachment to Proof of Electronic Service hereto.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Dated: January 18, 2010

Julie Day

EXHIBIT NO. "3"

Declaration of Expert Michael Johns, Ph.D., in Support of the San Diego Unified Port District's Submission of Comments, Evidence and Legal Argument

William D. Brown, Esq., (SBN 125468)
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Attorneys for Designated Party
SAN DIEGO UNIFIED PORT DISTRICT

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

In re Tentative Cleanup and Abatement Order No. R9-2011-0001 (formerly No. R9-2010-0002) (Shipyard Sediment Site)	**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** Presiding Officer: Grant Destache

I, D. Michael Johns, declare:

1. I am a Partner at Windward Environmental LLC in Seattle, Washington, where I am responsible for the management of large multitask, multidisciplinary environmental investigations, including remedial investigations/feasibility studies and natural resource damage assessments. I hold a PhD from the Belle W. Baruch Institute, University of South Carolina in marine biology. I have 30 years of professional experience in aquatic ecological and human health risk assessments, particularly those associated with contaminated sediments. Attached as Exhibit 1 is a copy of my CV.

2. As an expert in remedial investigations/feasibility studies, with particular expertise in assessing the impacts of contaminated sediments on aquatic species and human health, I have conducted many aquatic and human health risk assessments associated with contaminated sediments in and around heavy industrial sites, including ports.

3. In conducting my analysis I have reviewed and relied upon the following documents:

a. *Tentative Cleanup And Abatement Order No. R9-2011-0001. Shipyard Sediment Site, San Diego Bay, San Diego, CA*. Dated September 15, 2010, this document ("TCAO") was issued by the California Regional Water Quality Control Board ("CRWQCB"), San Diego Region ("Water Board").

b. *Draft Technical Report for Tentative Cleanup and Abatement Order No. R9-2011-0001 for the Shipyard Sediment Site, San Diego Bay, San*

Diego, CA – Volumes I, II, and III. Dated September 15, 2010, this document ("DTR") was also issued by the San Diego Water Board.

c. *NASSCO and Southwest Marine Detailed Sediment Investigation Report*, a technical report prepared in 2003 by the engineering and scientific consulting firm Exponent, of Bellevue, Washington.

d. Sediment chemistry data from SDG&E sampling event in response to Order R9-2004-0026.

e. California Water Code ("CWC") section 13304.

f. State Water Resources Control Board Resolution No. 92-94.

g. *Water Quality Control Plan for the San Diego Basin (9)*. Dated September 8, 1994 (with amendments effective prior to April 25, 2007), this document ("Basin Plan") was prepared by the California Regional Water Quality Control Board, San Diego Region,

h. U.S. Environmental Protection Agency (EPA) risk assessment and exposure assessment guidance.

i. Various other references of the type that are relied upon by experts in the field of remedial investigations/feasibility studies, sediment contamination and aquatic and human health risk assessments.

4. It is my opinion, based on my analysis and pertinent to the Port District's Submission of Comments, Evidence and Legal Argument that: (i) the TCAO and DTR are correct that concentrations of chemicals of concern ("COCs") in sediment in the Shipyard Sediment Site ("Site") exceed what could be considered background concentrations for San Diego Bay; (ii) the COCs were sufficient both in terms of their concentrations and distribution to impair the beneficial uses of the site; and (iii) the remedial action footprint

and alternative cleanup proposed by the Water Board are consistent with CWC 13304 and Resolution No. 92-49.

A. Aquatic and Human Health Risks

5. It is my opinion that there is sufficient evidence that the Shipyard Site sediment contamination has contributed to the impairment of beneficial uses in San Diego Bay and likely continues to harm human health and environmental resources for the following reasons:

a. Sediment contaminants in Site sediments are present, bioavailable, and, for a number of the contaminants, bioaccumulative.

b. Fish and shellfish collected at the Site have accumulated contaminants at concentrations predicted to harm seafood consumers (i.e., recreational and subsistence fishers).

c. 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.

d. Shipyard activities at the Site periodically disturb contaminated sediments, creating an ongoing source of legacy contaminants and impacting beneficial uses in the Bay.

6. It is my opinion that COCs are bioaccumulating in biota for the following reasons:

a. Laboratory exposures to site-collected sediments established that statistically significant accumulations of selected contaminants (arsenic, copper, lead, mercury, zinc, TBT, total PCBs, and high molecular weight PAHs) occur in clams that are in direct contact with and ingest

contaminated sediments, providing evidence that Site sediments contribute to the contaminant residues in the tissues of benthic organisms.

b. Benthic organisms are an important component of marine food webs and are a major component of the diet for both the sand bass[1] and spiny lobster[2] as well as many other fish, invertebrate and bird species.

c. Many of the fish and shellfish that prey upon contaminated benthic organisms within the Site can be consumed by people, are highly mobile and can migrate off the Site throughout large portions of San Diego Bay. These mechanisms contribute to the transfer of contaminants from the sediment to higher order receptors (including those relevant to human exposure) outside of the Site. 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.[3,4,5]

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[1] Mendoza-Carranza, M, and JA Rosales-Casian. 2000. *The feeding habits of spotted sand bass (*Paralabrax maculatofasciatus*) in Punta Banda Estuary, Ensenada, Baja California, Mexico.* In: CalCOFI Reports, Vol. 41. California Cooperative Oceanic Fisheries Investigations, pp. 194-200. Available from: http://www.calcofi.org/publications/ccreports/96-vol41-2000.html.

[2] Shaw, WN. 1986. *Species profiles: Life histories and environmental requirements of coastal fishes and invertebrates (Pacific Southwest): spiny lobster.* Biological Report 82 (11.47). Coastal Ecology Group, US Army Corps of Engineers, Vicksburg, MS and National Wetlands Research Center, US Fish and Wildlife Service, Slidell, LA.

[3] Hovel K, and C Lowe. 2007. *Shelter use, movement, and home range of spiny lobsters in San Diego County.* Paper MLPA07_01. California Sea Grant College Program, Research Completion Reports, University of California, San Diego, San Diego, CA.

[4] Pondella DJ, Allen LG, Craig MT, Gintert B. 2006. *Evaluation of eelgrass mitigation and fishery enhancement structures in San Diego Bay, California.* Bull Mar Sci 78(1):115-131.

[5] Jarvis ET, Linardich C, Valle CF. 2010. *Spawning-related movements of barred sand bass,* Paralabrax nebulifer, *in southern California: interpretations from two decades of historical tag and recapture data.* Bull South Cal Acad Sci 109(3):123-143.

d. PCBs are bioaccumulative, and cleanup is necessary for incremental improvement in the beneficial use of San Diego Bay by recreational and subsistence fishers.

7. It is my opinion that Site activities likely expose and/or redistribute legacy contaminants and create an ongoing source to San Diego Bay based on the following:

a. Site activities contribute to the release and potential transport of sediment-bound and dissolved contaminants in San Diego Harbor.

b. While legacy contaminants can be buried over time by natural sedimentation, subsurface contaminants can be exposed through vessel maneuvering, engine testing, and other Site activities.

c. Resuspension of bottom sediments can increase the bioavailability of contaminants (e.g., contaminants can temporarily partition to the water prior to settling back to the bottom) and serve to locally redistribute contaminants.

d. This physical reworking of the sediments in areas impacted by Site contaminants creates an ongoing source to San Diego Bay and continues to impact beneficial uses through the mechanisms discussed above.

B. Consistency of the Remedial Action Footprint Proposed by the Water Board with Resolution No. 92-49

8. In my opinion, the process used by the Water Board to identify areas requiring remedial actions (e.g., use of polygons to define the remedial footprint) was appropriate. In using the polygons, the Water Board recognized that species such as fish and spiny lobster are mobile and that exposure to Site contaminants can occur site-wide rather than only at a single location. In developing the proposed remedial footprint, the Water

Board correctly addressed impairment to more sedentary species, such as the organisms that form the benthic community. The factors used by the Water Board to select "worst first" polygons are consistent with my findings.

9. It is my opinion that the remedial footprint contemplated by the DTR will adequately address risks posed by contaminated sediments within the Site in accordance with the Water Board's responsibility to protect the beneficial uses of waters of the state pursuant to California Water Code section 13304, with the following caveats:

a. Polygon SW29 – Only a portion of this polygon was included in the proposed remedial action footprint; the remaining area will be the subject subsequent action by the Water Board. 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), I found that total PCB concentrations measured in samples represent some of the highest found within the Site. In addition polygon SW29 is at the edge of the study area and represents an unbounded area of higher concentrations of total PCBs. Because of these factors (i.e., high PCB concentrations not bounded by sediment data showing lower concentrations), the portion of polygon SW29 not currently included in the remedial footprint warrants subsequent action.

a. Polygon NA23 – The DTR acknowledges the high ranking of this polygon using the "worst first" analysis but concludes that it is technically infeasible to dredge because doing so would adversely affect Pier 12, the tug boat pier, and the riprap shoreline, as well as undermine the sediment slope for the floating dry dock sump. However, other areas

in which dredging is not feasible are currently included in the remedial action footprint. Alternative remedial technologies proposed in these latter areas include capping and backfill. The constraints that precluded dredging in polygon NA23 (e.g., inaccessibility of sediment under piers) appear to have been overcome for these other areas. Therefore, the decision not to include polygon NA23 in the remedial action footprint on the basis of technical feasibility should be re-evaluated.

I declare under penalty of perjury of the laws of the State of California that the foregoing is true and correct and that this declaration was executed on May 25, 2011 at Seattle, Washington.

D. Michael Johns

Exhibit 1

Curriculum Vitae

D. MICHAEL JOHNS, PHD

PARTNER

Education

- BS, Biology, The Citadel, 1972
- MS, Zoology, University of South Carolina, 1974
- PhD, Oceanography, University of South Carolina, 1980
- MBA, Management, University of Rhode Island, 1985

Areas of Specialization

- Natural resource damage assessment
- Negotiation and litigation support
- Sediment and water quality studies
- Ecological risk assessment
- Project management

Memberships

- Society of Environmental Toxicology and Chemistry
- American Society for Testing and Materials
- American Society of Zoologists
- Estuarine Research Federation

Work History

- Partner, Windward Environmental LLC, 2000-present
- Director of Operations, Environmental Solutions, Inc., 1998-1999
- Director, Environmental Assessment Group, EVS Environment Consultants, 1992-1998
- Program Manager, PTI Environmental Consultants, 1987-1992

Summary of Expertise

Dr. Johns is an aquatic scientist specializing in aquatic ecological and human health risk assessments, and natural resource damage assessments (NRDA), particularly those associated with contaminated sediment. Experience gained during his 30 years of professional experience at sites located throughout the United States has provided Dr. Johns with a broad knowledge base on issues pertaining to the effects of toxic pollutants on aquatic organisms. In addition to serving as a project manager and program manager on a number of large multi-task, multi-disciplinary environmental investigations, he has served in an advisory and advocacy capacity for a number of clients in support of regulatory review and reform, review and comment on pending legislation, liability management, negotiations with state and federal environmental regulatory agencies, and as a testifying expert in litigation in both state and federal courts. Examples of large, contaminated sites for which Dr. Johns was responsible for developing technical and strategic positions include the Grand Calumet River, Indiana; the Lower Duwamish River Superfund Site, Seattle; the Portland Harbor Superfund Site, Oregon; and the Lower Passaic River Superfund Site, New Jersey. As a principal investigator at the US Environmental Protection Agency's (EPA's) National Research Laboratory in Narragansett, Rhode Island, he co-authored multiple peer-reviewed research articles on the effects of the water-accommodated fractions of oil on the survival, growth and reproductive success of invertebrates.

Dr. Johns has provided technical support for litigation for numerous clients at sites including abandoned and active mine sites, petrochemical facilities, heavy industrial sites, and ports.

Environmental Studies Experience

Lower Passaic River Remedial Investigation/Feasibility Study

Dr. Johns is the principal-in-charge of the risk assessments being conducted for the Passaic River Superfund site remedial investigation/feasibility study (RI/FS). This site covers the lower 17 mi of the Passaic River and has been used for industrial activities for well over 200 years. In addition to providing technical support to the human health and ecological risk assessments technical leads, Dr. Johns serves on the senior team that provides strategic support to the client group. In this role, Dr. Johns critically reviewed a focused feasibility study (FFS) published by EPA, which called for the interim remediation of the lower 8 mi of the Passaic River at a cost ranging from $900 million to $2.3 billion. The team's risk-based review of the FFS documented the lack of any significant risk reduction associated with the remedial alternatives proposed in the FFS. Following receipt of comments, EPA withdrew the proposed FFS and is now undertaking significant reanalysis of the proposed action.

Lower Duwamish Waterway Remedial Investigation

Dr. Johns serves as program manager for the Lower Duwamish Waterway Superfund site RI. The site covers the lower 5 miles of the Duwamish River estuary that has historically served as an industrial core of the greater Seattle area. The RI is being conducted in two phases: the first phase identified candidate sites for early action under non-time critical removal authority and identified critical data requirements for completing the baseline risk assessments, and the second phase involved data collection and completion of the RI and baseline risk assessments.

Portland Harbor Ecological Risk Assessment

Dr. Johns is the program manager for the ecological risk assessment for the Portland Harbor Superfund site. This site includes approximately six miles of the lower Willamette River near its confluence with the Columbia River. The ecological risk assessment (ERA) will address a diverse array of contaminants (metals, organometals, pesticides, polychlorinated biphenyl [PCB], and hydrocarbons) and their potential impacts on resident and migrating species, including Endangered Species Act-listed salmonids.

East Waterway Sediment Investigation

Dr. Johns has served as the program manager for the East Waterway Sediment Investigation. The RI/FS activities at the site are being coordinated with navigation dredging being undertaken under the Water Resources Development Act. The goal is to coordinate the navigation dredging project with any other sediment remediation efforts that may be required under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Harbor Island Supplemental Remedial Investigations

Dr. Johns was the program manager for two supplemental remedial investigations (SRIs) of a sediment operable unit at the Harbor Island Superfund site. The SRIs were conducted by property owners prior to the Record of Decision. Dr. Johns developed a study design and provided technical support during negotiations with EPA and natural resource trustees. The sediment study involved the sampling and analysis of surface sediments from 51

stations. Surface sediments were analyzed for chemical contamination and tested for toxicity using a suite of sediment bioassays. Special investigatory testing was used to aid in interpreting sediment chemistry and toxicity data. Findings from the SRIs resulted in EPA significantly reducing the area considered for remediation.

West Waterway Tributyltin Study

Dr. Johns was the program manager for an assessment of the impacts of tributyltin (TBT) on marine species in Elliott Bay. The study included the collection of 30 surficial sediment and porewater samples to determine the range of concentrations of total and dissolved TBT in the area around Harbor Island. Laboratory bioaccumulation tests were conducted across the range of dissolved TBT concentrations in order to establish a predictive relationship between pore water TBT and tissue residue concentrations. A white paper summarized the available data on the relationship between TBT tissue residue concentrations and biological effects. The results were used to establish target effects levels to aid in establishing TBT cleanup levels in sediments operable units at the Harbor Island Superfund site.

Terminal 117 Non-Time-Critical Removal Action

Dr. Johns has served as senior advisor to the technical team responsible for developing and executing a non-time-critical removal action at the Port of Seattle's Terminal 117. The site, located within the Duwamish River Superfund site, was identified as a candidate for early action based on PCB sediment concentrations. In addition to delineating a proposed cleanup boundary, the project team analyzed the effectiveness of various remediation alternatives in reducing risks to the environment and in meeting projected long-term risk reduction goals for the entire Duwamish River Superfund site.

Additional Environmental Studies Project Experience

- Program manager for an ERA of a site in the St. Lawrence River contaminated with heavy metals. The focus of the assessment was impacts to aquatic communities resulting from direct exposure to metals and impacts to avian and mammalian species resulting from the trophic transfer of metals that biomagnify through the food chain. Analytical techniques used included a quantitative sediment quality Triad analysis and a regional food chain assessment of tissue residue concentrations of biomagnifying contaminants.
- Directed a retrospective risk assessment associated with impacts to aquatic and avian species exposed to contaminated sediment. Conducted in support of a claim for natural resource damages associated with the release of hazardous substances, the assessment included identification of substances of concern, determination of species at risk, and an estimation of the impacts associated with exposure to the contaminated sediment. Pathways of exposure included direct contact with sediment, ingestion of benthic invertebrates, and the food-chain transfer of persistent contaminants.
- Program manager for a quantitative ERA performed on a site southwest of Melbourne, Australia. The project included both human health and ecological risk assessments designed to evaluate whether the beneficial uses of groundwater to humans and the environment had been compromised by the presence of volatile organic compounds and metals measured in off-site groundwater wells. The specific ecological concerns were critical aquatic environments (a local lake and wetland system) downgradient of the site that might experience adverse effects if groundwater infiltration were occurring. The results of the risk assessment indicated there were no unacceptable risks associated with contaminant concentrations in groundwater. The data were used to develop and evaluate (through monitoring) a groundwater management plan for the site.

- Directed a prospective risk assessment to define target cleanup goals for contaminated sediment. The overall goal of the project is to develop target cleanup goals that will be protective of natural resources and to restore impacted resources to pre-exposure conditions. Cleanup goals for both aquatic and avian species will be based on an analysis of contaminant bioavailability and relative toxicity to key resources.
- Program manager of a region-wide study of the impacts of past mining practices at the historic Anaconda works in Montana. The assessment focused primarily on impacts to aquatic and terrestrial communities associated with the mass loss of tailings into Silver Bow Creek and the Clark Fork River. Study components included field collections of environmental data on metals concentrations, laboratory studies to determine contaminant mobility among media, and modeling using WASP4 and PRZM to estimate contaminant transport.
- Assistant technical director of the joint EPA/US Army Corps of Engineers Field Verification program evaluating the potential impacts of disposing contaminated sediments on aquatic ecosystems. The program involved the experimental disposal of contaminated sediment from Black Rock Harbor in Long Island Sound and included both field and laboratory evaluations of potential impacts. This study represented one of the first hazard assessments conducted on the impacts of contaminated sediment on aquatic communities.
- Program manager for a human health risk assessment associated with the consumption of seafood contaminated with PCBs and mercury. The assessment focused on the relative risks associated with the consumption of seafood collected in one portion of the Duwamish River watershed compared to the entire watershed. The risk assessment was modeled using a range of seafood consumption rates and assessed the risks associated with the consumption of specific target species.
- Developed a risk model for human consumption of fish exposed to contaminated sediments in Puget Sound. The risk model was based on a series of conservative assumptions relating to contaminant load, bioavailability and efficiency of contaminant uptake, and exposure time.
- Co-principal investigator in a study designed to evaluate the toxicity of contaminated sediments in the West branch of the Grand Calumet River, located near Hammond, Indiana. The investigation involved assessing the distribution of contaminants is sediment, assessing the potential toxicity of the surficial sediment to benthic invertebrates using standard toxicity tests, analysis of potential sources of contaminants identified in the sediment, and mass balance calculations for sediment load. Toxicity identification evaluations and AVS/SEM techniques were also employed to aid in identifying factors responsible for toxicity. The studies were undertaken in support of litigation concerning a claim for Clean Water Act violations.
- Program manager for a series of ecotoxicological studies designed to develop a defensible data set to derive site-specific water quality criteria for lead, cadmium, and zinc in the South Fork Coeur d'Alene River in Idaho. The resident species approach was selected to produce site-specific criteria. Although concentrations of these metals exceed ambient water quality criteria in this area, studies have reported healthy populations of macroinvertebrates and a self-sustaining population of native cutthroat trout. Using this approach, acute and chronic toxicity tests were conducted with resident species using site water to address relative sensitivities of the species at the site and site-specific bioavailability.
- Directed the development of two bioassays to assess the quality of contaminated sediments. One bioassay was a 10-day acute toxicity testing using the juvenile stage of polychaete Neanthes arenaceodentata. The second bioassay was a 20-day sublethal test using the same species. Response parameters included change in worm biomass and growth rate.

- Directed an interlaboratory comparison study of the 20-day Neanthes sediment bioassay for the Puget Sound Dredged Disposal Analysis (PSDDA) program. The study consisted of six laboratories testing seven sediments collected from Puget Sound and Yaquina Bay, Oregon.
- Designed and directed original research used to develop national chronic water quality criterion values for copper and cadmium.
- Co-authored a regional monitoring plan for open-water dredged material disposal sites in Puget Sound. The monitoring plan included on-site and off-site evaluation of physical and chemical characteristics of sediments and measures of sediment toxicity. Interpretive criteria and a site management strategy were also developed as part of the monitoring plan.
- Directed the field collection and analysis of chemical and biological samples obtained from six embayments in Puget Sound. Sediment samples were synoptically analyzed for metals and organic contaminants, assessed for toxicity using sediment bioassays, and evaluated for community health using benthic population assessment techniques and major taxa bioaccumulation. The results were used as baseline data in establishing multi-use open-water sites for the disposal of dredged sediments.
- Principal investigator and a member of an international consortium that characterized the nutritional effectiveness of Artemia for aquiculture.
- Conducted research on the effects of temperature and salinity regions on the growth and development of crustacean larvae.
- Coordinated research on the effects of temperature on the bioenergetics of development in fish eggs and larvae.
- Coordinated writing of biological effects section of programmatic environmental impact statement for the PSDDA study.

NRDA Project Experience

Grand Calumet River NRDA

Dr. Johns served as the program manager to a group of nine industrial clients in the defense of a claim for natural resource injuries in the Grand Calumet River system, in northwestern Indiana. Services provided included the development of an assessment strategy focused on a restoration-based approach to assess natural resource damage (NRD) liability. The restoration-based approach formed the technical basis of an agreement between the NRD defendants and the state and federal trustees, to work cooperatively on the assessment process.

Asarco Litigation Support

Dr. Johns was retained to provide expert testimony in Federal Court in *U.S. v. Asarco, et al.* The trial resulted when potentially responsible parties associated with a Coeur d'Alene Superfund site were not able to reach a settlement agreement with trustees regarding NRDs. As a result, the final resolution of any NRD liability would be based on the outcome of the trial, which was conducted in two phases: an injury determination phase and an injury quantification phase. In the injury determination phase, Dr. Johns provided an opinion on whether exceedances of ambient water quality criteria constituted an injury at this site. The analysis concluded that ambient water quality criteria were over-protective for the Coeur d'Alene River and could not be used because they did not

represent a direct measure of injury. In the second phase, he provided an analysis of the flawed process used by EPA in developing biological-based remediation and restoration goals.

Calcasieu Estuary NRDA

Dr. Johns served as the program manager to a group of industrial clients located within the Calcasieu Estuary, Lake Charles, Louisiana. Services provided included development of an overall assessment strategy incorporating a RI/FS and an NRDA into a single study design.

NRDA Support for a Confidential Client

Dr. Johns served as a technical advisor to an industrial client at a petroleum facility in preparation of an impending NRDA action by state and federal trustees. Preparatory work has included a preliminary assessment of potential liability at the site, identification of unique natural resources in the area, and limited fieldwork to collect data on the status of resource populations, including a colonial waterbird rookery containing multiple species.

Commencement Bay Phase I NRDA

Dr. Johns served as the program manager for the Commencement Bay Phase I NRDA. He provided coordination and oversight of the preparation of the Phase I NRDA plan, prepared litigation strategies, and provided negotiation support. In addition, Dr. Johns managed the design of Phase II injury determination studies and the development of an effective and secure database for case-related historical and new information.

Blackbird Mine NRD Support

Dr. Johns served as the case manager for the Blackbird Mine NRD claim, a multi-litigant case in federal court. He provided support for the litigation process, including coordination and management of technical studies; identification and coordination of principal investigators, peer reviewers, and expert witnesses; technical support for court pleadings, discoveries, interrogatories, and depositions; and development of testimony outlines.

Preliminary NRDA for a Confidential Client

Dr. Johns was the project manager for a preliminary NRDA of a site influenced by the discharge of mining wastes. The assessment relied on existing environmental data as well as data from studies designed specifically to assess natural resource injuries. Field studies were conducted to determine the impacts of metals contamination on regional groundwater and surface water supplies, and on aquatic and riparian habitat. In addition, a region-wide study was conducted to determine the fate and transport of contaminants implicated in damaging the natural resources. Study components included the field collection of environmental data on contaminant concentrations, laboratory studies to determine contaminant mobility among media, and modeling.

Additional NRDA Project Experience

- Retained by bankruptcy court administrator to assess a NRD claim made by trustees against remaining assets. Tasks include evaluating the validity of the claim made by the trustees and providing technical support during settlement negotiations.
- Retained as a testifying expert for a NRD case to define the appropriate application of baseline conditions in quantifying natural resource damage injuries at a site along the East Coast. Baseline issues affecting natural resources at this site include historic loss of wetlands during urban development, historic and present day

impacts from the discharges from combined sewer outflows (CSOs) and storm drains, and increases in the population levels for key species from historic lows.

- Program manager to a group of seven industrial clients conducting a cooperative NRDA with federal, state, and tribal trustees at the Portland Harbor Superfund Site. Initial services include providing technical support during negotiations with the trustee group and developing an assessment strategy that relies on data collected during the remedial investigation and use of the habitat equivalency analysis (HEA) model to estimate injuries and restoration requirements.
- Project manager for an assessment of NRD liability at the Gould Superfund Site, Portland, OR. The remedial design for the site included the filling of a small lake. Windward used the HEA model to estimate the level of injuring associated with past activities and to demonstrate that proposed restoration projects were sufficient to resolve any NRD liability claims.
- Project manager for an assessment of NRD liability at the Lockheed No. 1 Shipyard Site, located on Harbor Island, Seattle, Washington. The HEA model is being used to estimate liability and to define the size of restoration projects that could be offered to settle an NRD claim. Windward used HEA to demonstrate that combining habitat enhancements that could be incorporated into the remedial design, with removal of pier structures, would produce sufficient restoration credits for the site.
- Technical advisor for an assessment of NRD liability at the Todd Shipyard Site, located on Harbor Island, Seattle, Washington. Windward provided technical input during remedial design to maximize restoration credits while maintaining shipyard function. Windward developed a settlement document to be used during negotiations with the trustees.
- Manager for a project with a confidential client to determine the feasibility of developing restoration banks at complex sediment Superfund sites. Restoration credits produced through the bank could be purchased by companies to settle NRD claims. The feasibility analysis includes the development of tools that could be used to estimate liability and identify the types of restoration projects that should be incorporated into the restoration bank.
- Testifying expert on the viability of future NRD claims at nine sites that are currently undergoing remediation in *TRW, Inc. v. Underwriters of Lloyd's of London et al.*
- Technical advisor to the US Forest Service on potential natural resource injuries associated with an abandoned mine in eastern Washington State. Of primary interest are salmonids that were known to inhabit the stream adjacent to the mine site. Activities to date include providing technical review, comment, and proposed changes in site assessment studies to more sufficiently address natural resource issues, and providing technical oversight during field studies.
- Project manager for a preliminary NRDA of a site influenced by the discharge of mining wastes. The assessment relied on existing environmental data as well as data from studies designed specifically to assess natural resource injuries. Field studies were conducted to determine the impacts of metals contamination on regional groundwater and surface water supplies, and on aquatic and riparian habitat. In addition, a region-wide study was conducted to determine the fate and transport of contaminants implicated in damaging the natural resources. Study components included the field collection of environmental data on contaminant concentrations, laboratory studies to determine contaminant mobility among media, and modeling using WASP4 and PRZM to estimate contaminant transport.

- Project manager for a preliminary NRDA of a site influenced by the discharge of mining wastes. The assessment relied on existing environmental data and was conducted according to the Department of Interior Type B Regulations.
- Co-investigator of a laboratory and field study to demonstrate the relationship between exposure to organochlorine compounds and injuries to benthic communities using the polychaete Neanthes arenaceodentata as the surrogate species for the benthic community. Laboratory testing included spiking clean sediments with environmentally relevant concentrations of either PCBs or dichlorodiphenyltrichloroethane and determining the effects on the reproductive success of the polychaete during life cycle exposures (greater than 120 days).
- Conducted study for a group of private clients on the feasibility of apportioning natural resource damages by operable unit at a complex Superfund site.
- Conducted a preliminary review of historical data to identify potential natural resource damages associated with the discharge of wastes to an urban lake.

Negotiation and Litigation Support

- Provided expert opinion in defense of claims that historical shipbuilding operations resulting substantive release of hazardous substances and oil into adjoining water bodies.
- Provided expert opinion and participated in a year-long environmental mediation to develop clean-up criteria and define a remediation footprint at a sediment site in San Diego Bay.
- Provided expert opinion on the applicability of ambient water quality criteria in setting remediation goals and in determining natural resource injuries for the Coeur d'Alene River basin in *U.S. v. Asarco et al.* (Phase 1 trial)
- Providing expert opinion on the applicability of interim cleanup goals for the Phase 2 trial of *U.S. v. Asarco et al.*
- Provided written expert opinion on Clean Water Act violations for Holnam, Inc. in *Waste Action Project v. Holnam, Inc.* in U.S. District Court.
- Provided expert opinion on viability of future NRD claims for TRW, Inc. in *TRW, Inc. v. Underwriters of Lloyd's of London et al.* in Philadelphia Court of Common Pleas.
- Case manager for the U.S. Department of Justice during trial preparation for the Blackbird Mine NRD claim.
- Member of negotiation team for Star Enterprise in discussions with the Texas Natural Resource Conservation Commission and Texas Attorney General's Office.
- Provided technical support to various companies during Agreement on Consent negotiations with EPA.
- Provided expert opinion on client's likely historical knowledge that CSO discharges could cause impacts on aquatic resources for City of Seattle in an insurance coverage case.
- Retained as testifying expert to defend an oil and gas industry client in the Midwest in NRD litigation.

Guideline and Protocol Development

- Co-author of Methods for Collection, Storage and Manipulation of Sediments for Chemical and Toxicological Analyses: Technical Manual (EPA-823-B-01-002), published October 2001.
- Task group member for ASTM protocol entitled Methods for Collection, Storage and Manipulation of Sediments.
- Co-author of chapters addressing stream and sediment sampling protocols for the Handbook of Environmental Science, Health & Technology for the 21st Century, McGraw Hill, 2000.
- Co-authored ASTM protocol entitled Standard Guide for Conducting Sediment Toxicity Tests with Marine and Estuarine Polychaetous Annelids.
- Supervised the development of methods for evaluating the impact of contaminated sediments on the bioenergetics of benthic invertebrates for the EPA and ACOE under the Field Verification Program.
- Technical advisor to state and federal regulatory agencies during the development of biological and chemical procedures for evaluating the quality of sediments in Puget Sound.
- Directed the development of experimental approach to evaluating the relationship between juvenile growth and reproductive success in aquatic organisms during exposure to contaminated sediments.
- Supervised a review of Environmental Impact Statements and NPDES discharge permits to identify and quantify injuries to natural resources exempt from liability under CERCLA.
- Coordinated development of technical guidance manual for ocean disposal site designation for the EPA Office of Marine and Estuarine Protection.
- Directed the development of an NPDES permit application for the discharge of treated groundwater at a Superfund site in California.
- Developed a toxicity evaluation plan and an environmental water quality assessment plan for a mining site in California. The plans were developed based on NPDES regulations and requirements of the California Inland Surface Waters Plan.
- Directed the development of a pollution prevention plan for a major waste generator in the Puget Sound region under guidelines provided in WAC 173-307.

Teaching and Invited Presentations

- Lecturer and co-developer of course content for the University of Wisconsin – Madison College of Engineering course entitled Addressing National Resource Damage Liability.
- Lecturer and member of course content subcommittee for the University of Wisconsin-Madison College of Engineering course entitled Managing Contaminated Sediment.
- Lecturer for Executive Enterprises, Inc., for continuing legal education course entitled Natural Resource Damages Claims and Litigation.
- Lecturer for Law Seminars International for continuing legal education course entitled Natural Resource Damages Conference.
- Invited lecturer to the annual Ohio State Bar Association meeting in 1997.

- Invited speaker at the quarterly meeting of the Environmental and Natural Resources Section of the Colorado State Bar Association in 1994.
- Lecturer for the Northwest Conference on Natural Resource Damages presented by the Northwest Mining Association in 1994.

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EXHIBIT NO. "4"

Declaration of Expert Ying Poon, D.Sc., in Support of the San Diego Unified Port District's Submission of Comments, Evidence and Legal Argument

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SAN DIEGO UNIFIED PORT DISTRICT

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

In re Tentative Cleanup and Abatement Order No. R9-2011-0001 (formerly No. R9-2010-0002) (Shipyard Sediment Site)	**DECLARATION OF EXPERT YING POON, D.Sc, IN SUPPORT OF THE SAN DIEGO UNIFIED PORT DISTRICT'S SUBMISSION OF COMMENTS, EVIDENCE AND LEGAL ARGUMENT** Presiding Officer: Grant Destache

I, Ying Poon, declare:

1. I am the Vice President of Everest International Consultants, Inc. in Long Beach, California. I hold a Doctor of Science (D.Sc) in Hydrodynamics and Coastal Engineering from the Massachusetts Institute of Technology, and a Master of Science in Water Resources and Environmental Engineering from the State University of New York at Buffalo. I have over 20 years of professional experience with coastal and hydraulic engineering studies including sediment transport and water quality modeling. Attached as Exhibit 1 is a copy of my CV.

2. I am an expert in hydrodynamic, sediment transport and water quality modeling, with specific expertise in the application of numerical models to determine sediment transport processes.

3. I am experienced in statistical modeling, spectral analysis, physical model design and interpretation of model results, as well as field investigation. I have directed several extensive wind, wave, current, and ship motion field data collection programs in California and China. I have developed and applied the most up-to-date hydrodynamic and water quality and sediment transport models, analyzed tidal inlet stability, studied shoreline evolution and beach erosion, modeled wave transformation and wave-structure interactions.

4. As an expert in the application of numerical models to determine sediment transport processes, I have analyzed and modeled sediment transport processes in many locations in California and elsewhere.

5. In preparation for this project, I reviewed Tentative Cleanup and Abatement Order No. R9-2011-0001 and Draft Technical Report, the 2003 Exponent report entitled "NASSCO and Southwest Marine Detailed Sediment Investigation" (hereinafter, the "Exponent Report"), the March 29, 2001 report by Kenneth C. Schiff, Steven M. Bay and Dario W. Diehl entitled "Stormwater Toxicity in Chollas Creek and San Diego Bay" (hereinafter, the "Schiff Report"), the 1999 U.S. Navy report entitled "Sediment Quality Characterization Naval Station San Diego", the 2008 U.S. Navy report entitled "Modeling

Sediment Deposition from Switzer, Chollas, and Paleta Creek, San Diego Bay" Final Draft prepared by Bart Chadwick, PF Wang, Woo-Hee Choi, and Ernie Arias, the 2008 Tetra Tech report entitled "Receiving Water Model Configuration and Evaluation for the San Diego Bay Toxic Pollutants TMDL Draft", the MWH and HDR 2011 report entitled "Review of Chollas Creek Influences on the San Diego Bay Shipyard Sediment Site as Discussed in the Draft Technical Report to Tentative Cleanup and Abatement dated September 15, 2010", a 1998 technical paper published in the Journal of the American Water Resources Association entitled "Modeling Tidal Hydrodynamics of San Diego Bay, California" by PF Wang, Ralph Cheng, Kenneth Richter, ES Gross, Don Sutton and Jeffrey Gartner, and other relevant published reports and studies regarding coastal sediment transport and hydrodynamics that are reasonably relied upon by experts in those topics.

6. I evaluated the assertions made in the Exponent Report that Chollas Creek is a source of toxic discharges to the Shipyard Sediment Site (the "Site"). The Exponent Report assertion is based on the Schiff Report which showed the spreading of fresh water and suspended sediment plumes over the Site during two monitored rain events. The Exponent Report assertion assumes that suspended sediments traveling with the fresh water plume will deposit to the shipyard beds even though the Schiff Report did not show any measurement of where the suspended sediments would have been settled during the two rain events.

7. I developed a hydrodynamic and water quality numerical model (the "Bay Model") using the Environmental Fluid Dynamic Code ("EFDC") to assess the Schiff Report's conclusion regarding the spreading of toxic plume from Chollas Creek to the Site, as well as to evaluate whether the spreading of the fresh water and turbidity plumes over the Site could have resulted in significant sediment (and the associated toxics) deposition to the Site bed. EFDC is a 3-D model used by the U.S. Environmental Protection Agency for TMDL development in river, estuary and coastal regions. The EFDC model is currently being used for the San Diego Bay toxic pollutants TMDL development.

8. I verified the Bay Model with (i) available water levels and velocity data for San Diego Bay established by reputable sources that are of a type reasonably relied upon by experts in the fields of hydrodynamic and sediment transport processes in forming opinions or inferences upon the subject, and (ii) the fresh water plume data collected by Schiff as part of the Schiff Report. The Bay Model verification was similar to other models of San Diego Bay being used to simulate hydrodynamic and sediment transport of San Diego Bay.

9. The verified Bay Model was used to evaluate the depositional pattern of clay and silt from Chollas Creek. To use the Bay Model to assess sediment deposition from Chollas Creek, the flow and corresponding sediment loadings from Chollas Creek had to be defined.

10. Measured or watershed model-predicted flow and sediment loadings are not publicly available for Chollas Creek. Therefore, flow and sediment loadings were estimated based on the shape of the flow and TSS hydrograph data collected from a February 27-28, 2006 storm event. Flows for various return periods were determined by scaling the peak flow data collected for the February 27-28, 2006 event to FEMA return period peak flows. Sediment loadings were estimated for the study based on a sediment rating curve that relates sediment discharge and flow. The total sediment load includes sand, silt and clay. Only the transport of silt and clay were modeled for this study because contaminants are usually associated with the fines (silt and clay) and not sand.

11. Tidal conditions in San Diego Bay also had to be defined because tidal currents in the bay can affect the movement of sediment discharging into the bay from Chollas Creek. Tidal conditions used for model simulation were based on a representative "mean tide" created based on statistical results from the nearest operating tide gage, the Navy Pier in downtown San Diego operated by the National Oceanic and Atmospheric Administration since 1906.

12. The Bay Model shows that, during a 1-year flood event and a 100-year flood, the clay and silt deposition patterns differ from the transport patterns of salinity and suspended sediment. The fresh water plume extends throughout the Site, showing a

northward transport. The suspended sediment plume is visible in the Site, but the clay deposition pattern shows that most of the clays will settle elsewhere in the bay. The silt mainly deposited near the creek mouth, with some deposited in the shipyard areas and further north. The clay and silt deposition patterns determined from the Bay Model were consistent with other sediment transport studies conducted by the U.S. Navy for Chollas Creek.

13. Based on the Bay Model simulation results, the Exponent Report overestimates Chollas Creek as a source of toxics to the Site based on the results shown in the Schiff Report. This is because:

a. Transport of the fresh water flows from Chollas Creek moves northward during ebb tides and southward during flood tides;

b. A snapshot of the fresh water plume does not necessarily reflect the corresponding sediment deposition patterns;

c. Clay-sized particles from Chollas Creek are predominantly transported throughout the entire San Diego Bay; and

d. Silt-sized particles from Chollas Creek tend to deposit shortly after entering the bay near the creek mouth.

14. Consequently, for a 100-year rain event, the predicted clay deposition thicknesses at the Site are less than .04 mm and the predicted silt deposition thickness is less than 1mm. For the more typical 1-year rain event, the predicted clay deposition thickness at the Site is .002 mm and the predicted silt deposition thicknesses are less than .05 mm.

15. Given these results, it is unlikely that Chollas Creek would be a major source of contaminants that bind with fine sediments to the NASSCO and BAE shipyards. Even under a rare 100-year event, sediment deposition at the Site was predicted to be insignificant compared to the proposed remedial dredge depths. Based on the remedial footprints and dredged volumes specified in Tentative Cleanup and Abatement Order No. R9-2011-0001, the remedial dredge depths for BAE and NASSCO were estimated to be approximately 1.4 m and 1.9 m, respectively. The Bay Model results show that it would

take thousands of 100-year rain events for sediment discharging from Chollas Creek to have accumulated to similar thicknesses at the remedial dredge depths.

I declare under penalty of perjury of the laws of the State of California that the foregoing is true and correct and that this declaration was executed on May 25, 2011 at Long Beach, California.

Ying Poon

EXHIBIT 1

Curriculum Vitae

YING-KEUNG POON, *VICE PRESIDENT*

EDUCATION

Doctor of Science in Hydrodynamics and Coastal Engineering, Massachusetts Institute of Technology, 1988

Master of Science in Water Resources and Environmental Engineering, State University of New York at Buffalo, 1984

Bachelor of Science in Civil Engineering (Honors), University of Hong Kong, 1982

REGISTRATION

Registered Professional Engineer (Civil), California, #C56011

EXPERIENCE

Dr. Poon is responsible for managing and directing coastal and hydraulic engineering projects. He has over 20 years of professional experience with coastal and hydraulic engineering studies and design projects. His experience includes the planning and design of wetland restoration, river hydraulics and water resources studies, shore and slope protections, as well as harbor and port developments.

Dr. Poon is an expert in the application of numerical and physical models in solving complex water resources planning, coastal processes, and harbor engineering projects. Dr. Poon has developed and applied the most up-to-date numerical models on various wetland, coastal, and port development projects. He has also developed and used a wide range of hydrodynamic and water quality models, analyzed tidal inlet stability, studied shoreline evolution and beach erosion, modeled wave transformation and wave-structure interactions. He has performed harbor resonance studies, wave-ship-interaction, and dynamic mooring analyses. In addition, Dr. Poon is experienced in statistical modeling, spectral analysis, physical model design and interpretation of model results, as well as field investigation. He has directed numerous two- and three-dimensional physical model tests at the California Institute of Technology, US Army Corps Waterways Experiment Station, Oregon State University, Colorado State University and University of Florida. He has also directed many extensive wind, wave, current, ship motion, water quality and sediment transport field data collection programs in California and China.

Dr. Poon has instructed courses in Coastal Engineering and Introduction to Hydrology at the University of California, Irvine; as well as Hydraulic Design, Hydrology and Watershed Management at the California State University, Long Beach.

REPRESENTATIVE PROJECTS

Port of Los Angeles and Port of Long Beach WRAP Model Development, Los Angeles and Long Beach, California

The Port of Los Angeles (POLA) has recently adopted a Water Resources Action Plan (WRAP) – a management strategy intended to protect and improve water and sediment quality in the harbor, as well as to address the imminent promulgation of Total Maximum Daily Loads (TMDLs) for harbor waters and associated Clean Water Act permits. The WRAP is a joint document developed by the Ports of Los Angeles and Long Beach to address water and sediment quality issues of mutual concern in San Pedro Bay. Goals for the WRAP are to support the attainment of full beneficial uses of harbor waters and sediments by addressing the impacts of past, present, and future port operations and to

prevent port operations from degrading existing water and sediment quality. As part of the WRAP, Dr. Poon has supervised the development of a three-dimensional (3D) hydrodynamic and water quality transport model (WRAP Model) to provide a tool for the Ports to better understand existing harbor circulation and transport conditions, to support the selection of particular water quality improvement strategies, and to evaluate the effectiveness of current and future WRAP control measures.

Port of Los Angeles and Port of Long Beach TMDL Technical Support, Los Angeles and Long Beach, California
Dr. Poon is currently providing technical support services to the Port of Los Angeles and Port of Long Beach to address TMDL and other water quality issues in the LA/LB Harbor and San Pedro Bay. The tasks include review and provide comments on technical reports provided by EPA and their consultants on TMDL development for San Pedro Bay, coordinate with EPA, RWQCB and other stakeholders on technical issues involving TMDL development for San Pedro Bay, and develop strategy for the Ports on addressing the implications of the impending TMDL to Port's operation.

Port of Los Angeles Receiving Water Field Program, Los Angeles, California
Project engineer for an on-going project to collect concurrent storm water and receiving water data in the Port of Los Angeles West Basin to evaluate the spatial extent of impacts from storm water discharges to the harbor. In addition, the data will be used to evaluate the WRAP Model capabilities to simulate storm water discharges under dry and wet weather conditions. Responsible for coordinating the field data collection team and overseeing the field data analysis and WRAP Model evaluation.

Cabrillo Way Marina Dredging Special Study, Los Angeles, California
Project engineer for initial testing of using the LISST to monitor dredging suspended sediment plume and subsequent numerical model simulation of the sediment plume from dredging activities. Responsible for team coordination and analyses. Supervised field data analysis for correlating LISST and TSS to provide real time in-situ measurements, as well as numerical modeling of the suspended sediment plume.

Port of Los Angeles and Long Beach ADCP Data Collection, Los Angeles and Long Beach, California
Project engineer for project to collect concurrent velocity data throughout the Harbor. The data will be used to evaluate the transport conditions through the Harbor and San Pedro Bay. Dr. Poon is responsible for team coordination and managing data analysis procedures. Data analysis includes continuous 3-D velocities profiles at four locations and evaluation of the WRAP Model capabilities to simulate the transport conditions throughout the harbor.

Termino Avenue Storm Drain EIR, Long Beach, California
Project Engineer responsible for conducting an analysis to address the potential impacts to hydrology and water quality resulting from implementation of the Termino Avenue Drain (TAD) Project in Long Beach, California. Dr. Poon was responsible for overseeing the hydrologic and water quality analysis to assess the potential effect of water quality impacts on the biological resources (e.g., salinity impacts on marine fishes). Tasks performed included hydrodynamic and water quality modeling (RMA2 and RMA4) to

analyze the flood elevations, water velocities, salinity levels, and scour potential (erosion indicator). The analyses were then used by biologists to determine the project impacts to biological resources.

Cihuatan Marina Oceanographic Conditions Study, Bahia Ventana, Baja California Sur, Mexico
Project Engineer for a project to develop a marina in Bahia Ventana, Baja California Sur, Mexico. The proposed marina would be located in a salt flat near Punta Arenas. As part of the scope of work that formulated and implemented a work plan to design the proposed marina, Everest assessed the oceanographic conditions in the vicinity of the project site. The oceanographic and environmental conditions are some of the major considerations in structure designs and are significant in determining how the marina would ultimately operate. Dr. Poon supervised the preparation of a report that summarized data research and review; understanding of existing conditions based on available information and data; and estimated oceanographic conditions for winds, water levels, and waves. In addition, an instrumentation plan for collection of oceanographic data was also provided to prepare for a more fine tuned design in the next phase.

Dana Point Harbor Revitalization, Dana Point, California
Project Engineer for providing professional consulting service for relocating marina docks in Dana Point, California. This project was initiated by the Dana Point Harbor Department of the County of Orange to renovate the existing marina in Dana Point Harbor. Dana Point Harbor planned to replace all the boat docks and slips in the West Basin and East Basin. For temporary storage during construction, boats would be side-tied to temporary docks within the current fairways of the harbor. Everest assisted in developing the wave conditions and the corresponding wave loadings for the temporary docks. The following wave related processes were addressed for the temporary dock design and operation: locally generated wind waves; short period waves (sea and swell); long period waves (harbor resonance); criteria for vacating the docks; and wave loading on docks, piles, and boats. A report was prepared summarizing work which included: a) analysis of wind data and wind wave hindcasting, b) analysis of available wave gage data offshore of Dana Point Harbor and transformation of these waves to the docks, c) analysis of hindcasted extreme wave data near Dana Point Harbor and transformation of these hindcast waves to the docks, and d) a review and development of criteria for acceptable wave conditions for small boat harbors.

Sediment Remediation and Aquatic Enhancement at the Former Campbell Shipyard Site
Coastal Engineer responsible for a study to evaluate the stability of a proposed engineered cap to contain existing contaminated sediment at the former Campbell Shipyard site in San Diego Bay, California. The engineered cap had to be designed to resist propeller wash generated by tug boats working at an adjacent terminal. The study involved the development of a site-specific propeller wash model based on measured tug-boat generated currents at the site with an ADCP (Acoustic Doppler Current Profiler). The propeller wash model was then used to develop the design current conditions for the site using a risk-based analysis considering the probability distribution of boat types, boat operations, as well as water levels at the site. Appropriate armor stone size for the engineered cap was recommended based on the determined design current.

Warner Avenue Marina, Huntington Harbour, California
Coastal Engineer for the development of a 2-acre parcel being developed as a marina in the Huntington Harbour, Orange County, California. A team of consultants are retained by the owner to assist in designing the marina as well as obtaining the necessary approvals and permits from the various state and federal agencies with jurisdiction in the project site area. Dr. Poon led the effort to provide coastal engineering consulting services that would be needed for preliminary design and permit applications. The scope of work included: 1) conducted a site visit to observe and collect information of existing conditions; 2) obtained and reviewed prior studies, data, and other information related to the project, project site, vicinity, and coastal/oceanographic processes; 3) conducted Hydrodynamic Modeling and develop a hydrodynamic model of the Huntington Harbour System; 4) performed scour and sedimentation assessment of the alternatives; 5) prepared a report to summarize the purpose, methods, results, conclusions, and recommendations of the hydrodynamic and sedimentation assessment.

Port Hueneme Confined Aquatic Disposal (CAD) Site Hydrodynamic Stability Analyses, Ventura County, California
Project Engineer responsible for conducting a study to evaluate the hydrodynamic stability of the capping material of a proposed CAD site at the Port of Hueneme. Dr. Poon supervised the evaluation of wind wave conditions at the site and the hydrodynamic stability of the cap due to wave and tidal currents. Dr. Poon also directed a study to evaluate vessel generated propeller wash on top of the proposed cap and the potential scouring for the cap due to propeller wash. Dr. Poon worked closely with the team in recommending the selection and placement locations of the appropriate capping material.

Dominguez Channel Hydrodynamic and Water Quality Study, Port of Los Angeles, California
Technical Director for a study to develop a three-dimensional (3D) hydrodynamic and water quality model for the Dominguez Channel Estuary The goal of the study is to use the developed model, in conjunction with existing models and other relevant studies, to determine pollutant levels during the Total Maximum Daily Load (TMDL) development process. In addition to selecting a suitable model and leading the calibration and verification of the model, Dr. Poon also directed the design of an extensive field data collection program to collect hydrodynamic and water quality data for the calibration and verification of the model.

Tujunga Wash Watershed Management Plan, Los Angeles County, California
Dr. Poon currently serves as the Project Engineer supervising the hydrologic and hydraulic modeling task for the purpose of analyzing alternatives for increasing stormwater infiltration and groundwater recharge in the Tujunga Wash Watershed. The numerical models that are being utilized for this work include watershed model (LSPC), hydraulic model (HEC-RAS), water quality model (BASINS), and infiltration model (modified Sun Valley runoff/infiltration model).

Buena Vista Lagoon Restoration Feasibility Study, Carlsbad, California
Lead hydraulic engineer for a feasibility study of restoring the 220-acre Buena Vista Lagoon, located at the border of Oceanside and Carlsbad in San Diego County. The existing lagoon is a fresh water hydrologic regime that provides habitat for fresh water

fish and invertebrates, migratory birds, and waterfowl, including several threatened and/or endangered species. The study involved development of restoration goals/objectives, characterization of existing conditions (wildlife surveys, vegetation surveys, habitat mapping, dredged material characterization, and upstream watershed assessment), identification of restoration opportunities/constraints, development of restoration alternatives, evaluation of restoration alternatives, agency coordination, and public involvement. A unique aspect of the study was the need to help decision makers determine the hydrologic regime that the Lagoon should be maintained under in the future and the Study Team developed a unique analysis and alternative development approach to address this unique aspect of the study. Dr. Poon directed a team of hydrologist, hydraulic and coastal engineers to develop the strategy in integrating a wide range of watershed, hydrodynamic, sedimentation and water quality models, as well as analytical analyses to evaluate the hydro-period, salinity, flood impact, sedimentation, and tidal inlet stability of different restoration alternatives.

Taylor Yard Habitat Restoration Feasibility Study, Los Angeles, California
Lead hydraulic engineer and hydrologist for a study being conducted for the California State Coastal Conservancy that was aimed at determining the feasibility of restoring a 62-acre parcel along the Los Angeles River to riparian habitat. The site was used as a railroad maintenance facility for the past 75 years and past operations had contaminated the soil and groundwater underlying the site. Dr. Poon was responsible for directing a team of hydrologists and hydraulic engineers to develop baseline data and prepare conceptual habitat restoration designs, as well as to evaluate water quality and sediment transport issues for each alternative.

Las Virgenes Creek Master Restoration Plan, Calabasas, California
Hydraulic Engineer for a study being conducted for the City of Calabasas in Los Angeles County to prepare a Master Restoration Plan of Las Virgenes, McCoy, and Dry Canyon Creeks. Responsible for managing the hydrologic, hydraulics, and engineering components of this multi-disciplinary study. Everest performed baseline and with-project hydraulic modeling using the BASINS modeling package developed by the U.S. Environmental Protection Agency. The HSPF module was used to simulate the hydrology and hydraulics of the three creeks under baseline conditions and with-project conditions (i.e., with implementation of restoration alternatives). In addition, HSPF was used to simulate the transport of contaminants (e.g., nutrients) through the system for the purpose of evaluating the effectiveness of various restoration measures (e.g., emergent wetlands) at improving water quality in the downstream reaches of the creeks.

Ballona Creek Contaminated Sediment Control Management Study, Marina del Rey, California
Project Manager and Project Engineer for a feasibility study (F4 Plan Formulation) conducted for the U.S. Army Corps of Engineers, Los Angeles District (USACE) to evaluate different sediment control management plans that could reduce the need for frequent dredging at the Marina del Rey harbor entrance. The Marina del Ray harbor entrance channel suffered from sediment accretion, which inhibited navigation and necessitated periodic emergency maintenance dredging. The deposited sediment was contaminated with pollutants believed to originate in the Ballona Creek watershed and this caused problems in the disposal of the dredged material as well as the threat of environmental impacts caused by re-suspension of the material during dredging

operations. Alternatives considered included the construction of sediment traps along Ballona Creek, modification of existing jetties forming the mouth of the creek, and a combination of sediment trap and jetty modification. Project elements involved substantial understanding of the watershed characteristics feeding Ballona Creek, relationships between sediment and contaminant loads, river hydraulics, interaction between river flows and coastal zone hydrodynamics, and sediment and contaminant transport.

Newport Coast and Laguna Beach ASBS Protection Program: Cross-Contamination Study, Newport Beach, California

Project Manager for a study for the City of Newport Beach funded by a Proposition 50 grant for the Newport Coast and Laguna Beach ASBS Protection Program (Program) to address water quality of three areas of special biological significance (ASBS) along the Newport coastline and critical coastal area (CCA) #69 in Upper Newport Bay. The objective of the cross-contamination study is to determine impacts of pollutants discharges from the coastal watersheds to the ASBS and CCA. Water quality data, such as NPDES and TMDL monitoring data, to quantify potential pollutant and sediment loadings from the coastal watersheds were collected and reviewed. A sediment budget analysis was conducted to evaluate the sediment erosion/deposition characteristics along the three ASBS. A hydrodynamic and water quality model was developed to evaluate potential impacts to the ASBS from the identified pollutant and sediment sources. The study will also be used to support the development of an Integrated Coastal Watershed Management Plan.

Hydraulic Analysis for Roripaugh Ranch Habitat Mitigation Plan, Temecula, California

Project Manager for a hydraulic study to support a habitat mitigation plan. The Roripaugh Ranch Residential Development was constructed along Santa Gertrudis Creek that results in permanent impacts to federal and state jurisdictional waters and wetlands. As such, a habitat mitigation program would be implemented to adequately compensate for the loss of unvegetated streambed and riparian habitat. As part of the habitat mitigation plan, the downstream portions of two of the three tributaries would be graded to reduce erosion and create mule fat scrub habitat. Hydrologic and hydraulic analyses were conducted to identify high velocity areas and consequently erosion "hotspots" that might occur under the proposed habitat mitigation plan for the two tributaries. The hydrologic analysis determined peak flows for various return periods used for the hydraulic analysis. The hydraulic analysis was conducted to determine the velocities along the two tributaries using HEC-RAS. These analyses were also used for preliminary design of stream bank erosion control structures.

Tecolote Wetlands, San Diego, California

Project Manager for a feasibility study of the proposed Tecolote Wetlands in Mission Bay. This wetlands feasibility study included hydrologic and hydraulic analyses to evaluate the hydraulic performance as well as potential flood impact of different wetland development alternatives. Some of the wetland alternatives involved the use of complex hydraulic control structures including side weirs, dikes, culverts and pipes, to control water elevations within the wetland areas. The hydraulic analysis was conducted using in in-house Link-Node hydrodynamic model that can efficiently model creek flow, bay

flow as well as hydraulic control structures to provide efficient evaluations on potential flood impacts and hydro-periods of different wetland design alternatives. In addition, river inflows were also simulated using HEC-2 and assistance provided to FEMA to resolve issues regarding an existing flood map for Tecolote Creek.

Circulation Improvement Pilot Demonstration Project at Baby Beach, Dana Point, California

Project Manager of a study for Orange County Public Facilities and Resources Department to design, implement and evaluate a pilot program to test the use of the mechanical devices (Oloid) to improve water circulation at Baby Beach. The pilot program was designed based on a review of available wind, wave, tide, currents and bathymetric data for Baby Beach and Dana Point Harbor, as well as an understanding of the operation and performance of the Oloid device. Dr. Poon provided assistance to the county in supervising and coordinating with the vendor of Oloid during implementation of the pilot study. The evaluation of the performance of the pilot program was based on a dye tracer test and a bacteria monitoring program. Dr. Poon designed the dye tracer test, and the bacteria monitoring program. He supervised the tests, oversaw data analyses, and evaluated the performance based on the results. He then prepared and submitted a project report summarizing the objectives and scope of the pilot program; the program evaluation approach, the monitoring results, as well as the evaluation of the effectiveness of the pilot program.

City of Newport Beach Storm Drain Diversion Study, Newport Beach, California

Project Manager of a study to evaluate the relative impact of five major storm drains that discharge into Lower Newport Bay. These storms drains were considered for a dry weather storm drain flow diversion program. Field data collection and numerical modeling were two major aspects of the project. Data were collected in a two-week storm drain monitoring program that included storm drain flows and corresponding bacteriological samples. These data and historical data were analyzed. Hydrodynamic and water quality modeling of Lower Newport Bay and storm drain evaluation was conducted to determine the potential water quality improvement of various flow diversion alternatives.

Oloid Circulation Unit Alternative Evaluation, Newport Beach, California

Project Manager of a study for the City of Newport Beach to evaluate the effectiveness of alternative arrangements of Oloid Circulation Units to improve the water quality in the Newport Island Channels. Water Circulation modeling was performed to evaluate the effectiveness of several arrangement scenarios. Based on the results of the evaluation, recommendation on the optimum number of Oloid Circulation Units and arrangements was made. Dr. Poon directed the study, worked with the City staff, oversaw the analyses and modeling effort, and prepared a final report to document the study.

Circulation Improvement Study for Newport Island Channels in Newport Bay, Newport Beach, California

Project Manager of a study for the City of Newport Beach to evaluate the feasibility of using submerged pumps to improve circulation and mixing at Newport Island Channels. Hydrodynamic and water quality modeling were conducted to evaluate the effectiveness of six different pump layouts in improving water quality and mixing. The results of the analyses were documented in a report.

Oloid Circulation Unit Demonstration Evaluation, Newport Beach, California
Project Manager of a field program conducted to estimate the flow field generated by the Oloid device installed at the Rivo Alto (East) Channel in the City of Newport Beach (City). The flow patterns and water movements generated by the Unit was observed in the field. Based on the data collected at the site, it was estimated that the Oloid generated a flow rate of about 1.2 to 1.5 million gallons per day (MGD). These flow rates were then compared with those generated by the InStreem unit that the City tested earlier at Newport Island Channels. Results were summarized and recommendations were documented as to the next steps on the water quality improvement effort.

Channel Islands Harbor Circulation Improvement Study, Oxnard, California
Project Engineer for a study conducted for the Ventura County Harbor District to develop circulation improvement alternatives aimed at improving the water quality within Channel Islands Harbor to meet AB411 indicator bacteria criteria. Responsible for directing hydrodynamic and water quality modeling using the RMA2 and RMA4 components of the Surface Water Modeling System (SMS). The numerical model was used to simulate the harbor hydraulics (RMA-2) and contaminant dispersal (RMA-4) under existing conditions and to evaluate the effectiveness of circulation improvement alternatives (e.g., pumping) at reducing the number of beach closures for two local recreational beaches (Kiddie Beach and Hobie Beach) associated with indicator bacteria levels that exceed the AB411 criteria. Also directed a field tracer study to collect site specific data to validate the proper choice of the dispersion coefficients for the RMA4 model.

Newport Bay Circulation Studies, Newport Beach, California
Project Manager and Project Engineer to assist the City of Newport Beach on several studies aiming at improving water circulation and water quality at Newport Dunes Lagoon and Newport Island Channels within Newport Harbor. Supervised the use of 2-D hydrodynamic and water quality models to evaluate different alternatives in improving water circulations. Designed and directed field works to monitor the performance of an InStreem unit (a patented mechanical device designed for enhancing water flows) at the project locations. Assisted City staff to seek input from local residents, environmental groups, as well as resource and regulatory agencies during the development and evaluation of project alternatives.

Balboa Seawall Assessment, Newport Harbor, Newport Beach, California
Project Manager for a study to assist the City of Newport Beach to assess the impact of sea level rise on properties and residences in Balboa Island and Little Balboa Island. Project tasks included an existing seawall elevation survey, a numerical flood modeling analysis and a seawall structural assessment. A report was prepared to summarize: 1) the major findings of the seawall and residence elevation surveys, 2) flood and wave overtopping modeling results for existing and future sea level rise scenarios, 3) a seawall condition assessment, 4) flood hazard mitigation alternatives and recommendations for seawall improvement phasing for Balboa Island and Little Balboa Island, and 5) recommendations for coping with sea level rise for Balboa Island, Little Balboa Island, and the entire Newport Bay and Harbor.

Los Angeles Region Dredged Material Management Plan (DMMP), Los Angeles County, California

1. ***DMMP Feasibility (F3) Study***
   Project Manager to conduct the Regional Dredged Material Management Plan (DMMP) Feasibility (F3) Study for USACE to identify and evaluate potential dredged material management options for the Los Angeles County region. This information would be used to develop a regional Dredged Material Management Plan for the management of clean and contaminated sediments dredged within Los Angeles County. Project specific tasks included: coordination with the LA Region Contaminated Sediment Task Force (CSTF) on the CSTF Strategy Report development and the DMMP Study; identifying and evaluating suitable disposal/management options; preparation of technical reports summarizing the sediment and biological characteristics of the LA region, the coastal environment of the study area, and the historical dredging activities in the region; and recommending disposal/management options to be further studied and evaluated.

2. ***Preparation of Management Report and Programmatic Environmental Impact Statement (EIS), Los Angeles County, California***
   Project Manager to prepare the DMMP Management report and the Draft and Final Programmatic EIS document for USACE, Los Angeles District. The goal for the DMMP Management Report and Programmatic EIS is to provide a baseline evaluation of disposal alternatives under hypothetical scenarios typical of regional dredging projects for Los Angeles County while ensuring that the scenarios are also applicable to the entire region serviced by the Los Angeles County. This baseline evaluation of alternatives may then be used by future proponents to streamline future environmental impact assessment documents. As the Project Manager, Dr. Poon was responsible for coordination among various public agencies to collect inputs and comments, supervises the preparation of deliverables including 1) DMMP Report Outline; 2) Draft and Final DMMP Management Report; 3) Internal Draft, Public Draft and Final Programmatic EIS. Currently, the draft Programmatic EIS is being reviewed by stakeholders.

Development of a Regional Sediment Management GIS Model for Ventura County, Santa Barbara County and San Diego County – Coastal Sediment Benefit Analysis Tool (CSBAT)

Project Manager for two task orders to support USACE, Los Angeles District in developing a GIS model as part of the California Coastal Sediment Master Plan, a comprehensive plan for managing sediment in coastal California to maintain and restore the health of California's beaches and shoreline. The plan incorporates all components (e.g. engineering, environmental, economics, recreation, physical processes and barriers, regulatory, policy, legal, coastal watershed land-uses, current and projected watershed developments, real estate, and financial considerations) that affect the maintenance and restoration of beaches. The goal of the project is to develop a GIS-based model called Coastal and Sediment Benefit Analysis Tool (CSBAT) that helps decision makers to optimize the placement of sediment to various sources. The model provides information of costs and benefits for user-defined alternatives including dredge and disposal cost, transportation cost, recreation benefits, source and receiver site sediment compatibility, and potential environmental impacts. Two CSBAT models have

been developed – one for the Santa Barbara and Ventura Counties, and the other for the San Diego County.

- **Santa Barbara and Ventura Counties** – Sediment sources considered for these counties include Ventura Harbor, Santa Barbara Harbor, Channel Islands Harbor and Matilija Dam. Receiver sites included Oxnard Shores, Oil Piers, Carpinteria, Goleta, Rincon, Surfer's Point, El Capitan, Pierpoint and La Conchita.

- **San Diego County** – Sediment sources considered in this task order include Oceanside Harbor, Mission Bay, offshore sites, debris basins and wetlands/Lagoons (Batiquitos, San Elijo, and Buena Vista). Receiver sites included Oceanside Beach, Carlsbad Beach, Moonlight Beach, Fletcher Cove Beach, Del Mar Beach, Torrey Pines Beach, Mission Beach and Imperial Beach.

Differential Cost Benefit Analysis for Various Dredging and Material Placement Options at Ventura Harbor, Ventura Harbor, California
Project Manager to assist the US Army Corps of Engineers, Los Angeles District (USACE) on a study to evaluate the differential cost and benefits in disposing dredged sediment from the Ventura Harbor to three beach locations other than the normal disposal areas. The cost functions developed for the study would be used as input to a pilot GIS model that is being developed to provide a management tool to evaluate future dredging and disposal options along the California coast. The GIS model would use the Ventura Harbor dredging and disposal operation as an example in developing a regional sediment management model. Different dredging, transportation and disposal methods were studied in developing the cost functions. Beach-user surveys were conducted to determine the economic benefits of having wider beaches at the three selected sites. In addition, coastal engineering evaluations were conducted to determine the initial and subsequent changes in beach widths at the three selected beach sites for placing different amount of dredged materials on the beaches.

San Diego Regional Beach Sand Replenishment Project (RBSP) – Cost Benefit Analyses, San Diego County, California
Dr. Poon was the project engineer for Everest. He supervised the coastal process analyses including: estimation of potential gain in beach widths for different proposed sand placement quantities, and the evaluation of beach erosion rates at the proposed RBSP beaches. He also supervised the cost estimates for the proposed RBSP alternatives.

Contaminated Sediments Task Force – Contaminated Sediment Management Strategy Report: Los Angeles, California
Dr. Poon is co-authoring the Los Angeles Region Contaminated Sediment Task Force (CSTF) Management Strategy Report. The CSTF consists of a group of regulators, port representatives, consultants, and environmental groups. Project components include identifying suitable disposal alternatives, field monitoring techniques, best management practices, and beneficial reuse options. The purpose of the strategy report is to document the disposal issues regarding contaminated sediments in LA region, evaluate and recommend management options, review current regulatory framework, as well as suggest new unified regulatory approach.

Los Angeles Region Contaminated Sediment Pilot Studies, California
Assisted the U.S. Army Corps of Engineers, Los Angeles District (USACE) to manage a series of pilot studies for the Contaminated Sediment Task Force (CSTF) to evaluate treatment options for managing contaminated sediments in the Los Angeles Basin area. These studies included an aquatic capping pilot study, a cement stabilization bench scale and field pilot study, a sediment washing bench scale study and a sediment blending study. The aquatic capping study involved the dredging of over 100,000 cubic meter of contaminated sediment from near the mouth of the Los Angeles River and Estuary, the placement of the dredged material at the North Energy Island Borrow Pit in the Port of Long Beach, and lastly the capping of the placed material with a 1.5 m thick of clean material. The cement stabilization study involved a bench scale test and a field test to evaluate the effectiveness of mixing different binding agents with contaminated sediments in "binding" the contaminants, as well as to improve the physical strength of the sediment such that the treated sediment can be used as landfill material. The sediment washing study evaluated different methods that can effectively remove the chlorides from the dredged sediment so the treated material can be disposed at upland disposal sites. Lastly, the sediment blending study involved evaluating beneficial reuse of dredge materials as near shore fill and/or roadway grade fill.

Huntington Beach Bluff Top Park Storm Damage Reduction Feasibility Study, Huntington Beach, California
Project Engineer for a feasibility study (F3 milestone) to establish baseline, without project conditions for the Huntington Beach Bluff Top Park in Huntington Beach, California. The study involved identifying existing conditions, analyzing historical aerial photographs (shoreline and bluff top position), estimating future bluff top erosion, conducting economic analyses, and preparing three reports (Aerial Photograph and Shoreline Mapping Appendix, Coastal Engineering Appendix, and F3 Main Report). A unique aspect of this project was the use of a risk-based method to analyze storm damage costs and benefits. The methodology was based on the use of a Monte Carlo model that linked extreme bluff top erosion events to economic damages over a 50-year simulation period. Dr. Poon developed a methodology to relate historical bluff top erosion events to storm wave energy to arrive at erosion values for a given return period (e.g., 50-year erosion value). In addition, Dr. Poon directed all aspects of the coastal engineering study including shoreline mapping analyses, aerial photo evaluation, erosion analyses, and wave analyses.

Shoreline Protection Device Evaluation, Imperial Beach, California
Project Engineer for a shoreline protection device inventory and evaluation study of the coastal area of the City of Imperial Beach. The study involved reviewing California Coastal Commission and City permit files to obtain information on shoreline protection device design, performance, and public access impacts. A scour assessment using information from permit files and site observation was conducted to estimate the beach profile under severely eroded conditions. The scoured beach profile was used, in conjunction with wave climate data, to conduct a wave runup and overtopping analysis to estimate the frequency at which the various shore protection devices (i.e., revetments and seawalls with various slopes and crest elevations) along the Imperial Beach coast get overtopped. Dr. Poon directed all aspect of the coastal engineering analyses

including numerical wave modeling using the REFDIF to evaluate nearshore wave conditions, developing methodology to calculate wave runup and overtopping based on structure types and wave conditions, as well as probability analyses to define wave overtopping conditions for different return periods.

Los Angeles River Estuary Borrow Pit Study, Long Beach, California
Supervised the design and implementation of a field data collection program to measure hydrodynamics and suspended sediment within the LA River during an El Niño wet season. The field program involved three-dimensional surveys of current velocities within the estuary during extreme flow events with a Doppler current meter and a USGS sediment sampler. Also directed the analyses and interpretation of the collected field data to understand the fate of sediments supplied to the estuary, as well as the stability of the Los Angeles River Borrow Pit.

Pier J Expansion Landfill Hydraulic Stability Analyses, Long Beach, California
Project Manager and Project Engineer responsible for a hydraulic stability analysis for a proposed landfill at the Port of Long Beach during construction, as well as the design of a revetment for the seawall. Developed methodology to evaluate potential sediment loss during placement by barge dumping, as well as the loss of resuspended material under the action of waves and tidal currents. Directed the use of various numerical models including STFATE and RMA 2 for the study. The STFATE model was employed to evaluate potential sediment loss during placement when material is dumped from barges. The US Army Corp model RMA2 was used to simulate tidal circulation at the landfill location. Prepared a technical report to summarize the objective, methodology and findings of the study.

Agua Hedionda Lagoon Northern Jetty Restoration Project, Carlsbad, California
Provided coastal engineering support services for preliminary design of restoration of the Agua Hedionda Lagoon Northern Jetty. Supervised preliminary design of the jetty structure that included design wave calculations, cross-section development, and cost estimate preparation. A shoreline evolution study was conducted to estimate the impact of the proposed project on upcoast and downcoast beaches. The shoreline evolution study included an aerial photograph review, beach profile analysis, and numerical modeling using GENESIS, a one-line shoreline evolution model developed by the U.S. Army Corps of Engineers, Waterways Experiment Station. Presented to agency representatives and interested public on the coastal processes and engineering aspects of the project.

Pier J Surge Mitigation, Port of Long Beach, California
Project Engineer responsible for the design of a $25 million breakwater in the Port of Long Beach. The purpose of the breakwater was to mitigate container vessel movement caused by long-period waves. Dr. Poon defined the scope of work for wave penetration and armor stability physical model tests and performed three-dimensional harbor resonance numerical model studies, including the effects of wave-ship-berth interactions. He also performed a dynamic analysis for the six degrees of ship motions, calculated mooring line and fender forces, supervised three-dimensional harbor resonance model studies, directed two-dimensional breakwater stability model tests at the U. S. Army Corps of Engineers Waterways Experiment Station (WES), supervised

numerical simulation of wave transformation from offshore to the project site, and supervised design of the optimized breakwater cross-sections.

Pier 400 Dredging and Landfill, Port of Los Angeles, California
Performed wave climate analyses to determine the operational and extreme wave conditions at the project location. Developed probability model for cost-effective optimization of rubble-mound breakwater and seawall designs. Designed seawall hydraulic stability physical model tests at the U.S. Army Corps of Engineers Waterways Experiment Station (WES).

Mooring and Berthing Study, Port Huneme, California
Project Engineer responsible for the design of new dolphins and the replacement of damaged piles for an existing pier. Assessed the failure of an existing dock caused by excessive propeller forces generated by nearby tugboats. Performed mooring and berthing analyses to evaluate loading on the pier and recommended the numbers, size and location for new mooring dolphins.

Pier 300 Ship Motion Study, Port of Los Angeles, California
Performed numerical simulation of long-wave penetration and modeled the wave-ship-berth interaction problem for a container ship berthed at Pier 300. Also performed dynamic analysis for the six degrees container ship motions and calculated the mooring line and fender forces.

Berthing and Mooring Analyses, Port of Los Angeles, California
Project Manager and Project Engineer responsible for berthing and mooring analyses of five different berth locations at the Port of Los Angeles. The study involved the evaluation of maximum tanker size that can be safely moored at different berth locations by comparing the mooring load with the structural capacity of the existing wharf structures. In addition, recommended additional hardware for two existing berths to increase the capacity of the existing facilities.

Navy Basin Surge Study, Port of Long Beach, California
Project Manager and Project Engineer responsible for a comprehensive surge study of the Navy Basin at the Port of Long Beach. This study focused on the physical solutions necessary to maintain high dock crane productivity for container vessels moored in a long period wave environment. Dr. Poon defined a comprehensive scope of work for physical model testing and numerical model simulations, supervised three-dimensional harbor resonance model studies at the U. S. Army Corps of Engineers' Waterways Experiment Station (WES), analyzed and compared results of numerical and physical model studies and developed new physical model testing procedures and data reduction methodology. As project manager, he coordinated the efforts of sub-consultants, WES, a Technical Review Committee, and the client. He also organized technical review meetings and prepared technical reports.

Wu-Si Harbor Development, I-Lan County, Taiwan
Project director for the planning and feasibility study of over four kilometers of coastline development at I-Lan County of Taiwan. Wu-Si Harbor, originally developed as a fish harbor, was to be redeveloped into a multi-purpose harbor with a marina, a fish harbor

and piers for cruise vessels. In addition, the government planned to develop the coastline along Wu-Si Harbor into a recreational resort and culture center. The entire project included a landfill for resort development to the north, a park and a museum adjacent to, and a recreational beach and a wetland preservation area to the south of Wu-Si Harbor.

Ship Motion Monitoring System, Port of Long Beach, California
Project Manager and Project Engineer responsible for the design and testing of a video camera system that could provide real time ship motion tracking. The project involved the use of state-of-the-art digital video camera and imaging technology to achieve automatic tracking of a moving ship.

Naval Submarine Base, Pearl Harbor, Hawaii
Assessed wind, wave, tide, and current conditions of a Naval Submarine Base at Pearl Harbor. Performed mooring analyses for two Navy submarines.

Harbor Resonance Model, Port of Los Angeles and Port of Long Beach, California
Project Manager and Project Engineer responsible for the development, calibration and verification of a new finite-element long-wave numerical model for the Port of Los Angeles and the Port of Long Beach. The numerical model covered the entire LA/LB Harbor complex and was calibrated against physical model results and prototype data.

Harbor Basin Study, Port of Long Beach, California
Evaluated different alternatives to solve the surge problem at an existing harbor basin. Analyzed the performance of a slightly porous gate in providing surge protection for the harbor basin and calculated the hydrodynamic loading on the gate and its supporting guide piles.

Agua Hedionda Lagoon Dredging Support, Carlsbad, California
Project Engineer responsible for preparing dredging plans for Aqua Hedionda Lagoon. Assisted in the preparation of permit application.

Martinez Marina Dredge Support, City of Martinez, California
Project Manager for the engineering support on maintenance dredging for the Martinez Marina in northern California. Tasks included preparing dredging plans and sections for permit application; preparing plans, specifications and cost estimate (PS&E) for construction contract.

New Port and Terminal Planning, China
Designed and directed the implementation of a wave data collection program for the project site. Performed wave hindcast study to evaluate typhoon-generated waves at project location. Evaluated wave conditions at different berth locations and assessed impact to container terminal operations.

Container Terminal, Venezuela
Evaluated the wind and wave conditions at a proposed new container terminal. Assessed potential vessel motions and their impact to container loading/unloading operations.

LNG Terminal Planning, China
Project Manager and Project Engineer for a project to help a confidential client in the preliminary design of a LNG terminal in Taiwan. Developed the operational and extreme wind and wave conditions at the project location, utilized wave modeling to optimize the harbor layout, reviewed breakwater cross-section designs, as well as conducted a site visit to interview local engineers and contractors to understand local construction practices and unit costs.

Navy Pier at San Clemente Island, California
Project Engineer responsible for assessing the wind, tide, wave, and current conditions at a Navy pier. Calculated the wave and current loads on the proposed pier.

Biological Baseline, San Pedro Bay, California
Dr. Poon reviewed prior numerical modeling studies and recent site date to evaluate the changes in tidal circulation and subsequent impact to water quality within the Ports resulting from the construction of the Pier 400 Landfill and the Transportation Corridor Gap. He also assessed the effect of closing the Transport Corridor Gap to tidal circulation and water quality within the Ports.

Bolsa Chica Wetland Restoration, Huntington Beach, California
Technical leader directing all coastal processes and computer modeling studies for a 1,100-acre wetland restoration project in Huntington Beach, California. Studies performed including tidal hydraulic modeling, inlet stability analyses, sediment transport investigations, shoreline morphology modeling, water quality analyses, and flood control studies. Developed new sediment transport model to evaluate the growth of flood and ebb bars at a tidal inlet. Proposed new methods to divert flood flow from the flood control channel to the wetland.

Redondo Beach Outfalls, Redondo Beach, California
Project Manager and Project Engineer responsible for a study to assess the impact of discharging brine effluent through two existing outfalls to beach erosion, as well as the impact of constructing a pipeline along an existing bicycle/pedestrian path along the Redondo Beach. The work involved site observation, beach sand sediment size analyses, hydraulic analyses of different discharge conditions and the evaluation of brine discharge to beach erosion, and the recommendation of the preferred discharge location. Permitting issues for the project was also addressed.

Multidisciplinary Field Study, San Diego, California
Dr. Poon participated in a multidisciplinary field study on the properties of surface slicks off the coast of San Diego. His work for the University of Delaware sponsored by the Office of Naval Research included the planning of the field experiment, development of measuring techniques and supervising graduate student to perform in-situ measurements of the physical properties of slicks and surface waves.

Hellman Ranch Wetlands, Seal Beach, California
Directed hydraulic and water quality modeling studies to quantify the flow and water quality conditions for different wetland design alternatives.

Batiquitos Lagoon Enhancement Project, Carlsbad, California
Responsible for tidal hydraulic studies and estimation of extreme wave forces on bridges. Proposed new methodology based on results from physical modeling, numerical modeling, and analysis to develop probability distribution of extreme water elevations inside an inlet due to the combination of storm surge, tides, breaking waves, and seiche. Prepared hydraulic and hydrology report for the East and West Carlsbad Bridges.

San Dieguito Lagoon, San Dieguito, California
Project Engineer responsible for evaluating the feasibility of employing enhanced hydraulic flushing to maintain an open tidal inlet at the San Dieguito Lagoon.

Wind Data Collection, Port of Long Beach, California
Directed a field program to collect wind data at two locations at the Port of Long Beach. Designed and implemented the field data collection program. Analyzed the collected wind data to understand the importance of wind to ship motions at the Port of Long Beach.

Wave Data Collection, Santa Monica, California
Project Manager and Project Engineer responsible for the design and implementation of a wave data collection program. The project involved the deployment of two wave gages at Santa Monica Bay to collect wave data for one year. A unique feature of the program was that the program was designed for the collection of long period waves of the order of two to five minutes in addition to sea and swell waves. The data was analyzed to identify the relations between long (wave period > 25 seconds) and short (period < 25 seconds) waves.

Roosevelt Lake, Arizona
Project Manager and Project Engineer responsible for a wind and wave study to compare the environmental conditions for two alternative marina sites. Evaluated the performance of different floating breakwaters in providing wave protection to the marina. Provided a cost estimate on the construction of the floating breakwaters.

Wave Damage Assessment, Navy Housing Project, Guam
Directed a study to assess the hurricane-generated wave conditions at the project location, and the subsequent wave overtopping and wave-induced splashing that caused damages to a Navy Housing Project situated on top of a cliff over 100-feet high. Analyzed the risk and frequency of occurrence of similar wave events in the future. Recommended mitigation solutions to minimize future wave damages.

Reconnaissance and Feasibility Level Studies, Marina del Rey, California
Project Engineer for a reconnaissance feasibility level study conducted for the U.S. Army Corps of Engineers Los Angeles District to investigate both short-term and long-term solutions to the shoaling problem at the Marina del Rey south entrance. Solutions, which were investigated in detail, included selective dredging, aquatic and nearshore confined disposal, upland disposal, disposal in geotextile containers, treatment, and structural alternatives.

Evaluation of a New Concrete Armor Unit for Shore Protection
Project Manager and Project Engineer responsible for a study to evaluate the performance of a new concrete armor unit for shore protection. Designed and supervised hydraulic stability tests for the new armor unit at a wave flume at the Oregon State University. Evaluated the stability, runup, rundown and reflection properties of the new armor unit in extreme wave conditions. Supervised structural tests to determine the structural integrity of the concrete armor unit at the University of Florida. Prepared a design manual for the new concrete armor unit in coastal applications.

Playa Vista Development, Marina del Rey, California
Project Engineer responsible for the Playa Vista Development Project to evaluate hydraulic circulation and water quality conditions for different development alternatives. Evaluated the pros and cons of different methods to hydraulically connect the Playa Vista Development with the Marina del Rey Navigation Channel and the Ballona Creek.

On-Call Mitigation Support Services, Port of Long Beach, California
Project Engineer for the evaluation of potential wetland restoration projects in Southern California to determine the possibility of providing mitigation credit for fill associated with port expansion. Dr. Poon directed the hydraulic and hydrology analyses/studies needed to address the key issues such that the Port can determine the feasibility of participating in a wetland restoration project. Typical studies included development of conceptual restoration designs (grading plans, target habitat distribution, and sections), modeling of tidal hydraulics, assessment of water quality parameters, calculation of mitigation credit, development of construction methods, and preparation of construction cost estimates.

Beach Replenishment, Seal Beach, California
Developed cost-benefit economic analysis model for the evaluation of different beach replenishment alternatives. Evaluated the suitability of different sand sources as beach-fill material. Reviewed beach replenishment design plans and specifications.

Reconnaissance Study, Oceanside, California
Project Engineer responsible for a reconnaissance study along the City of Oceanside coastline. Assessed storm damages for different storm and tide events based on shoreline retreat estimates, wave runup and overtopping, wave force impacts, and ocean water inundation. Evaluated different beach protection alternatives to minimize future storm damages.

Madera Road Bridge, Simi Valley, California
Supervised hydraulic modeling using HEC-RAS model to study different bridge and culvert crossings. Also evaluated potential scouring and mitigation for the alternatives, as well as recommended upstream and downstream bank protection measures.

Orote Point Seawall, Guam
Project Engineer for a shore protection design project on the Island of Guam. Supervised wave runup and overtopping analyses using numerical and physical models, evaluated different seawall and revetment alternatives. Optimized the chosen revetment

design with two-dimensional wave flume tests conducted at the Danish Hydraulic Institute. Reviewed design drawings and specifications for the revetment.

Berthing Pier, Pearl Harbor, Hawaii
Coastal Engineer responsible for evaluating wind, wave and current conditions for the design of a berthing pier. Analyzed wind, wave and current loads on different Navy surveillance ships and performed mooring analysis for the ships under normal operational and hurricane conditions.

Typhoon Damage Assessment, Long Dong Marina, Taiwan
Evaluated probable causes of damage by a typhoon to a newly constructed marina in Taiwan. Assessed the typhoon-generated waves and water levels, evaluated the marina design conditions, reviewed the design of the breakwater that was supposed to provide adequate protection for the marina during typhoons.

Hurricane Damage Assessment, Bora Bora, French Polynesia
Project Manager and Project Engineer responsible for assessing the cause of damages to a resort area in Bora Bora. The scopes include a wave hindcast study based on typhoon records, the evaluation of storm surge and wind setup, and the calculation of wave forces on structures.

Mauna Lani Cove Resort, Hawaii
Proposed and evaluated the performance of an artificial reef in enhancing surfing conditions at the Mauna Lani Cove Resort. Evaluated extreme wave conditions near the entrance of a proposed channel and determined when the conditions would be hazardous for small craft navigation.

PUBLICATIONS AND PRESENTATIONS

Gallien T., J. Schubert, Y. Poon, B. Sanders. "*Mapping Developed Coastal Flood Zones for Climate Change Adaptation Planning: Accounting for Tides, Waves, Sea Level Rise and Flood Defense Structures*", presented at 2010 Fall Meeting, American Geophysical Union, San Francisco, December 13-17, 2010.

Poon Y., S. Kimura, A Jirik, M. Arms. "*Development of A Hydrodynamic and Water Quality Model for the Los Angeles and Long Beach Harbors*", presented at 32nd International Conference on Coastal Engineering (ICCE 2010), Shanghai, China, June 30 – July 5, 2010.

Curtis, K., B. Mardian, Y-K Poon. *"Cabrillo Way Marina Dredging, Port of Los Angeles, California, U.S.A., Part 1 – Sediment Plume Monitoring"*, presented at Western Dredging Association (WEDA) 30th Technical Conference & 41st Texas A&M Dredging Seminar, San Juan, Puerto Rico, June 6-9, 2010.

Poon, Y-K, S. Kimura, K. Curtis. *"Cabrillo Way Marina Dredging, Port of Los Angeles, California, U.S.A., Part 2 – Sediment Plume 3-D Modeling"*, presented at Western

Dredging Association (WEDA) 30th Technical Conference & 41st Texas A&M Dredging Seminar, San Juan, Puerto Rico, June 6-9, 2010.

Poon, Y-K, P. King, M. Carpenter, H. Schlosser, S. Kimura. "*Development of a Sediment Management Support Tool for San Diego County, California, U.S.A.*", Proc. 33rd International Association of Hydraulic Engineering and Research (IAHR) Biennial Congress on Water Engineering for a Sustainable Environment 2009, Vancouver, Canada, August 9 -14, 2009.

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PROFESSIONAL AFFILIATIONS

Technical Advisory Committee Member, TMDLs for the Dominguez Channel, and Los Angeles and Long Beach Harbors, 2006 – Present

Committee Member, American Society of Civil Engineers, Environmental and Water Resources Institute (EWRI) Computation Hydraulics Task Force, 2005 – 2008

Secretary, American Society of Civil Engineers, Environmental and Water Resources Institute (EWRI) Computation Hydraulics Task Force, 2008 – 2010

Member of the following Professional Associations:

American Society of Civil Engineers
American Shore and Beach Preservation Association
International Navigation Association (PIANC)
Watershed Management Council

EXHIBIT NO. "5"

Excerpts from Volume III of the Deposition of California Regional Water Quality Control Board Cleanup Team Member, David Barker, dated March 3, 2011

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

IN RE THE MATTER OF)
)
TENTATIVE CLEANUP AND ABATEMENT)
ORDER NO. R9-2011-0001)
)
)
)

DEPOSITION OF DAVID BARKER

Volume III, Pages 431 - 679

San Diego, California

March 3, 2011

Reported By: Anne M. Zarkos, RPR, CRR,
CSR No. 13095

A. Yes.

Q. And the one December 22nd, 2009?

A. Yes.

Q. And last but not least, the one September 15th, 2010?

A. Yes.

Q. And is it your understanding that in the August 24th, 2007, version, the Port was not named as a primarily liable or as a discharger at the site?

MR. CARRIGAN: Document speaks for itself. Go ahead.

THE WITNESS: I believe in that document the Port was named as a -- was not named as a primary responsible party. We named the Port as a discharger but did not name them as a primary discharger in the order, but reserved the right to do so in the future if the Port tenants became -- were not cooperative and where cleanup was not proceeding and where we needed to bring in the -- to name the Port.

MR. BROWN: At this point, are the tenants, the dischargers that were named as tenants of the Port, are they cooperative with the Water Board at this point?

MR. WATERMAN: Vague.

MR. CARRIGAN: Overbroad. Compound.

MR. WATERMAN: Vague. Objection. Vague.

MR. CARRIGAN: I'll join Mr. Waterman.

THE WITNESS: At this -- at this point in time the cleanup is proceeding cooperatively, yes. Oh, excuse me. There is no cleanup proceeding. We are putting together a draft proposal for cleanup, and the hearings have yet to be held. And so it's open to question. Who's cooperating on one day may change on the next.

BY MR. BROWN:

Q. And of today is there -- are the Port tenants acting in a cooperative manner in the process?

MR. WATERMAN: Objection. Vague.

MR. CARRIGAN: Same objections. Vague. Compound.

THE WITNESS: To -- to my knowledge, yes.

BY MR. BROWN:

Q. Who, other than you, would have more knowledge on this issue?

A. There's different -- the project is complex enough with enough different aspects where, for instance, on the development of the CEQA document, I attend some of those meetings but not all. There could be things happening there that I'm not immediately aware of. So other team members might have greater knowledge on certain aspects.

BY MR. BROWN:

financially, meaning you personally?

MR. CARRIGAN: Assumes -- assumes facts not in evidence. Misstates testimony. Go ahead.

THE WITNESS: I -- no. I made no attempt to verify that, no.

BY MR. BROWN:

Q. Okay. Were there any other facts that changed in regard to the Port District between 2009 and 2010 in your perspective?

A. Okay. My perspective. The -- I think in the 2009 time frame the staff -- the Port had made available to staff technical scientific expertise from its consultant Mike Johns, I remember.

And the board -- or Cleanup Team was very appreciative of that. And there came a period where the -- that type of support was withdrawn.

MR. CARRIGAN: I just want to take this opportunity to caution you, David, not to discuss any of the communications that may have been made -- that were specifically made during mediation to the extent they may involve Mr. Johns or other people from the Port. Okay?

THE WITNESS: Okay.

MR. CARRIGAN: Just to caution you.

THE WITNESS: Yeah. Okay.

BY MR. BROWN:

Q. Okay.

And aside from communications in mediation, were you aware of any representations by the Port that they would withdraw your access to Mr. Johns?

A. Just that -- I'm just trying to recall that there was a period where we did not feel like we had free access to Mr. Johns, yeah.

Q. Do you recall when the Port withdrew from the mediations?

A. I -- I believe it was -- no. You know, actually, I don't remember that time period. I might be confusing it with something else.

Q. Does January of 2010, does that seem the appropriate time to you?

A. It -- it may have been, yes.

Q. The -- the other version came out in December 22nd, '09, and then the Port withdrew, perhaps, in January 2010.

So do you believe that the Port's change of heart occurred during that time frame?

A. It may have, yes.

Q. Okay.

Aside from the level of cooperation that the Port was providing, were there additional facts that were gathered between 2009 and September 15th, 2010, draft

TCAO that were gathered that influences your decision or -- and I -- when I say you, I mean the Water Board's decision -- to name the Port as a discharger?

A. Yes.

Q. And what is that?

A. There was a process, I believe, in July of 2010 where parties had to identify witnesses that might testify in the matter of the CAO. And we received word that the Port was not planning on assigning witnesses to testify in support of the CAO.

Q. Do you know if that has changed since then?

A. I -- I don't know that, no.

Q. Do you know if Mike Johns has been designated as an expert witness now in this proceeding?

A. I'm not aware of that, no.

Q. Have you made any inquiries as to whether his opinion would support the Water Board's opinion?

MR. CARRIGAN: Lacks foundation. Calls for speculation.

THE WITNESS: Have I made any inquiries to Mr. Johns?

BY MR. BROWN:

Q. Or to the Port.

A. Or to the Port, no.

Q. Okay. Have you ever received any information

that Port experts would not support the Port -- the Water Board's decision in this matter?

A. No.

Q. And in addition to the issues that we identified, level of cooperation and willingness to provide testimony, are there any other facts that you're aware of that changed between 2009 and 2010 when the next TCAO was issued?

A. Yes.

Q. What other facts occurred?

A. In the process of -- of drafting the various iterations of the DTR and CAO -- and I can't remember the exact time frame -- but some discussion began on what areas near shore might be used to stage the stockpiling and dewatering of the dredged material.

And the thought was that whatever area was selected might be on port -- Port District tidelands. And we had some hopes that the Port would come forward with sites that could be leased for that purpose. And -- and that type of information did not seem to be forthcoming.

Q. Had the Port at any time prior to 2010 indicated that it would provide tidelands as an area for dewatering?

A. I guess not specifically to me. My -- and this

dewatering on Port tideland sites?

A. No, I do not know that, no.

Q. Do you know whether the Port has ever evaluated the number of truckloads it would have to move through Barrio Logan for a dewatering system?

MR. CARRIGAN: The Port or the board?

MR. BROWN: Why don't we ask it both ways. Let's start with the Port.

BY MR. BROWN:

Q. Do you know whether the Port has ever made a determination in that regard?

A. No, I don't.

Q. Do you know whether the board has ever made a determination?

A. I believe in the DTR that there is some discussion of truckloads of material that would have to be -- where the dredge spoil would be transported and possible impacts to communities. But it's done in a very summary and quick fashion, nothing detailed.

Q. Do you know whether the board has ever examined what communities would be affected?

A. Not in any detail, no.

Q. Since the time when it appeared that the Port may have objections to a dewatering program on its tidelands, has the Port offered any alternative

solutions?

A. Yes.

Q. And what alternative solutions has the Port suggested?

A. In recent discussions, there was talk of using the Convair Lagoon site as a -- as a containment structure to receive the material.

Q. And at what stage are those decisions?

A. Very preliminary at this time.

Q. And has the Port offered to provide assistance in having that option evaluated?

A. Yes.

Q. And has the Port ever mentioned the issue of environmental justice in regard to the CDF disposal option?

A. The -- I've been to one meeting with this. And I remember there was talk of transporting the material via barge to the site, negating the need to truck the material through adjacent neighborhoods.

Q. And would that have a better environmental justice impact as you now perceive it?

MR. CARRIGAN: Calls for speculation. Lacks foundation.

MR. WATERMAN: Objection. Join.

THE WITNESS: Yeah. That's one of the functions

of the EIR that's under development to evaluate that. So I -- I don't have a position on that.

BY MR. BROWN:

Q. Okay. And has the Port offered to assist with that portion of the EIR that would evaluate this option?

A. Yes.

Q. In addition to the other matters that we recently discussed, can you think of any other factors that developed between 2009 and 2010 that were relevant to the determination that the Port should be named as a primarily responsible party?

MR. WATERMAN: Objection. Vague.

THE WITNESS: Let's see. Let me -- let me just do a little scrawling just to jar my memory here.

MR. CARRIGAN: Don't write anything on that paper.

MR. BROWN: Mr. Barker -- Mr. Barker, I have a better suggestion, which is because the way we've been doing this is we've been breaking for lunch around 12:30 or so, let's take a five minute break now, we'll go for an hour, and then we'll think about lunch. How does that work?

MR. CARRIGAN: That will be fine.

MR. BROWN: Thank you.

THE VIDEOGRAPHER: Off the record. Time is

issue as to why they -- those two polygons were not included in the footprint?

MR. CARRIGAN: He's not been designated as such.

THE WITNESS: Yeah. Yeah. I -- I -- I -- I guess I'm not designated as such.

BY MR. BROWN:

Q. Okay. All right. On to some more general topics, I wanted to go through with you some of the other sites that you may have worked on.

A. Okay.

Q. Did you work on the Campbell Shipyard Site, the one that's distinct from this site?

A. Yes, I did.

Q. And what was your involvement with that site?

A. It was two-fold. I was involved with the -- the review of a sediment quality assessment which led to the development and issuance of a cleanup and abatement order. And then sometime after that, I was involved with the board's issuance of waste discharge requirements for a confined sediment disposal facility at the site.

Q. And did you work with port representatives at that site?

A. Yes.

Q. And did you find them to be cooperative?

A. Yes, yes.

Q. Were they named as a primary responsible party at that site?

A. No.

Q. And was the site ultimately capped?

A. Yes, it was.

Q. Do you know what method of imposing cleanup standards was used at that site? And let me give you a few options.

Was it 92-49, SQOs, or TMDLs?

A. It was not -- it was 92-49.

Q. Okay. The TDY site, were you involved in that site?

A. Yes.

Q. And did you work with port representatives on that site?

A. It's been -- this goes back some years. But I think there was some Port involvement, yes.

Q. Do you know if the Port was cooperative at that site?

A. I -- I believe they were, yes.

Q. And do you know if this site is still continuing on into the future?

A. Yes, it is.

Q. And it's the subject of renewed interest at this point?

interaction with the board on that site.

Q. Are you aware of any other sites where the board is currently working with the Port?

A. None come to mind. Oh, excuse me. The Shelter Island Yacht Basin, a copper TMDL -- with -- involving conversion of boat hulls to -- using different type of vessel paints. The Port is working very cooperatively with the board on that.

Q. Okay. Let's go back through a couple of these on another issue. On the Campbell -- on the Campbell Shipyard site, 92-49 was used as the method for determining cleanup at that site. At the TDY site, what was used as the method?

A. This would have been back in the 1980s. It would have been pre-Resolution 92-49, but similar concepts involved.

Q. Okay. And at the Tow Basin site, what mechanism is being used?

A. Well -- well, any time the board sets cleanup goals by, the board needs to set those levels in conformance with the principles in 92-49. So whatever is done in the Tow Basin at some point needs to show that it is in conformance with it.

Q. Are you aware that the SQOs are being implemented at the Tow Basin?

A. I'm not aware of that. But it sounds correct. They are -- they are in effect now, and the sediments in the cleanup decisions would have to be in conformance with -- with that State Board policy.

Q. And how about the South Bay Power Plant; are sediments being investigated there?

A. There are plans to initiate investigation at that site, yes.

Q. And what mechanism will be used there?

A. We haven't gotten into detailed formulating strategy on that. But the board has authority under the Water Code to issue investigative orders to -- similar to the shipyard site to do sediment -- to obtain sediment quality assessments and to -- to see if any remedial work needs to be done.

Q. Will that be under the governance of the SQOs?

A. Yes, it would.

Q. Okay. And how about the Goodrich facility; are you aware of whether there's any sediment investigation going on at that site?

A. There -- there has been a -- some type of cleanup done in the marsh land down in that area. But I'm not aware of other work being done. It could be. I'm just not aware of it.

Q. Okay. And at the Shelter Island Yacht Basin,

what work is being performed at that site?

A. The Port is kind of taking a lead role in investigating the use of alternative vessel hull paints to curtail copper discharges into the bay from the current hull paints that is causing water quality standards to be exceeded.

They are kind of coordinating, serving as a -- as a facilitator between the board and the underwater hull cleaners and the marina operators that -- where these vessels are congregated, those type of activities.

There is -- we believe the Port is going to begin some routine reporting to us on water quality conditions in Shelter Island Yacht Basin and giving us reports on how many boat hulls are being modified to -- with less toxic paint, that type of thing.

Q. Okay. At the Campbell Shipyard Site, are you aware whether the Port contributed to the cost of cleaning up that site?

A. I'm not aware of how the cleanup was ultimately financed, no.

Q. Have you ever received any indication that the Port paid for that?

A. I -- I'm not aware of it, no.

Q. And I think you mentioned in your deposition a couple of days ago that outside the NASSCO cleanup, this

I, ANNE M. ZARKOS, Certified Shorthand Reporter for the State of California, do hereby certify:

That the witness in the foregoing deposition was by me first duly sworn to testify to the truth, the whole truth and nothing but the truth in the foregoing cause; that the deposition was taken by me in machine shorthand and later transcribed into typewriting, under my direction, and that the foregoing contains a true record of the testimony of the witness.

Dated: This 23 day of March, 2011 at San Diego, California.

Anne M. Zarkos, RPR, CRR
CSR No. 13095

EXHIBIT NO. "6"

Excerpts from Volume I of the Deposition of California Regional Water Quality Control Board Cleanup Team Member, Craig Carlisle, dated February 9, 2011

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

IN RE THE MATTER OF)
)
TENTATIVE CLEANUP AND ABATEMENT)
ORDER NO. R9-2011-0001)
)
)
)

DEPOSITION OF CRAIG CARLISLE

Volume I, Pages 1 - 148

San Diego, California

February 9, 2011

Reported By: Anne M. Zarkos, RPR, CRR,
CSR No. 13095

A. That order of magnitude rings a bell.

Q. How much was the total cost of the CEQA document, do you know?

A. The contract right now has been funded. I believe their contract is approximately $450,000. But that's not the entire CEQA complete document.

Q. Do you know what portion of the CEQA, on a percentage basis, the Port was asked to fund?

A. No.

Q. Do you have an estimate?

A. No.

Q. Was it in the neighborhood of 40 percent?

A. I don't know.

Q. Do you know if the Port objected on the grounds that the amount that was asked was too high?

A. No.

MR. CARRIGAN: Asked and answered. Calls for speculation.

BY MR. BROWN:

Q. All right. What other grounds other than failing to pay for the CEQA document and withdrawing technical support did the Port withdraw its assistance?

A. Withdrawing from the mediation.

Q. And did any other parties withdraw from the mediation?

A. I don't know for certain. I assume they did.

Q. Were you ever made aware of what the Port's role was in cleaning up the Campbell Shipyard case?

A. Yes.

Q. And what was it?

A. I heard they took ownership of that.

Q. Do you know what they funded?

A. I have no idea. I didn't know, you know, where the money came from at all.

Q. Do you know who instigated the mediation in this case, the current case?

A. I thought it was the Regional Board, David King.

Q. Do you know whether the Port went to the Regional Board and requested that mediation be instigated?

A. No.

Q. Do you know if the Port provided funding for the mediation?

A. No.

Q. Do you know if the Port provided insurance money to make the mediations go forward?

A. No.

Q. Do you know if the Port contributed to technical data that was used during the mediation?

MR. CARRIGAN: I'm going to stop and instruct

I, ANNE M. ZARKOS, Certified Shorthand Reporter for the State of California, do hereby certify:

That the witness in the foregoing deposition was by me first duly sworn to testify to the truth, the whole truth and nothing but the truth in the foregoing cause; that the deposition was taken by me in machine shorthand and later transcribed into typewriting, under my direction, and that the foregoing contains a true record of the testimony of the witness.

Dated: This 22nd day of February, 2011 at San Diego, California.

Anne M. Zarkos, RPR, CRR
CSR No. 13095

EXHIBIT NO. "7"

Excerpt from the Tideland Use and Occupancy Permit between SDG&E and the San Diego Unified Port District, dated June 2, 2005

San Diego Unified Port District
Document No. 49089
Filed JUN 02 2005
Office of the District Clerk

TIDELAND USE AND OCCUPANCY PERMIT

THIS PERMIT, granted this 2 day of JUNE, 2005, by the SAN DIEGO UNIFIED PORT DISTRICT, a public corporation, hereinafter called "District," to SAN DIEGO GAS & ELECTRIC COMPANY, hereinafter called "Tenant," WITNESSETH:

District for the considerations hereinafter set forth, hereby grants to Tenant upon the terms and conditions and for the purposes and uses hereinafter set forth, the right to use and occupy a portion of those lands conveyed to the San Diego Unified Port District by that certain Act of the Legislature of the State of California, entitled "San Diego Unified Port District Act," Stats. 1962, 1st Ex. Sess., c. 67, as amended, which lands are more particularly described as follows:

> Approximately 261,727 square feet of tideland area and 6,737 square feet of subsurface tideland area located on the south side of Belt Street west of the foot of Sampson Street in the City of San Diego, California, more particularly delineated on Drawing No. 021-028 dated March 9, 2005, attached hereto as Exhibit "A" and by this reference made a part hereof.

This Permit is granted upon the following terms and conditions:

1. **TERM:** The term of this Permit shall be for five (5) years, commencing on the 1st day of November, 2004, and ending on the 31st day of October, 2009, unless sooner terminated as herein provided.

2. **RENTAL:** As and for the rental, Tenant agrees to pay to District the sum of Fifteen Thousand Sixty-Seven Dollars ($15,067) per month, payable in advance on or before the first (1st) day of each and every month during the term of this Permit.

All payments shall be delivered to the Treasurer of the District. Checks shall be made payable to the Treasurer and mailed to the Office of the Treasurer, San Diego Unified Port District, Post Office Box 120488, San Diego, California 92112-0488, or delivered

DUPLICATE - ORIGINAL

During any period of time employed by Tenant under this paragraph to remove ships, vessels, barges, hulls, debris, surplus and salvage materials, or test for and/or remediate Contaminants as required in this Permit, Tenant shall continue to pay the full rental to District in accordance with this Permit which said rental shall be prorated daily.

9. **TERMINATION:** This Permit may be terminated by Executive Director of District or his duly authorized representative or Tenant as a matter of right and without cause at any time upon the giving of one hundred eighty (180) days' notice in writing to the other party of such termination.

10. **HOLD HARMLESS:** Tenant shall, to the fullest extent permitted by law, defend, indemnify, and hold harmless District and its officers, employees, and agents for any and all liability, claims, judgments, damages, proceedings, orders, directives, costs, including reasonable attorneys' fees, or demands arising directly or indirectly out of the obligations undertaken in connection with this Permit, or Tenant's use, occupancy, possession or operation of the above-described premises, except claims or litigation arising through the sole negligence or willful misconduct of District. It is the intent of this Paragraph that Tenant indemnify and hold harmless District for any actions of Tenant or District, including duties that may be legally delegated to Tenant or to third parties, except for those arising out of the sole negligence or willful misconduct of District. This indemnity obligation shall apply for the entire time that any third party can make a claim against or sue District for liabilities arising out of Tenant's use, occupancy, possession, or operation of the above-described premises, or arising from any defect in any part of the premises.

11. **INSURANCE:** Tenant shall maintain "OCCURRENCE" form Commercial General Liability Insurance covering premises and operations in the amount of not less than Two Million Dollars ($2,000,000) combined single limit per occurrence for bodily injury, personal injury and property damage suffered or alleged to be suffered by any person or persons whatsoever resulting directly or indirectly from any act or activities of Tenant, of any person acting for it or under its control or direction, or any person authorized by it to use the rented premises. Either the general aggregate limit shall apply separately to this location or the general aggregate limit shall be twice the required occurrence limit.

All required insurance shall be in force the first day of the term of this Permit. All insurance companies must be satisfactory to District, and the cost of all required insurance shall be borne by Tenant. Certificates in a form acceptable to District evidencing the existence of the necessary insurance policies, and original endorsements effecting coverage required by this clause, shall be kept on file with District during the entire term of this Permit. Certificates for each insurance policy are to be signed by a person authorized by that insurer to issue evidence of coverage on its

event the dispute is not resolved informally, prior to and as a precondition to the initiation of any legal action or proceeding, the parties shall refer the dispute to mediation before a retired State or Federal judge mutually selected by the parties. The dispute shall be mediated through informal, nonbinding joint conferences or separate caucuses with an impartial third party mediator who will seek to guide the parties to a consensual resolution of the dispute. The mediation proceeding shall be conducted within thirty (30) days (or any mutually agreed longer period) after referral, and shall continue until any party involved concludes, in good faith, that there is no reasonable possibility of resolving the dispute without resort to a legal action or proceeding. All costs of the mediation shall be shared equally by the parties involved. Each party shall bear its own attorneys' fees and other costs incurred in connection with the mediation. In the event the parties are unable to resolve the dispute through mediation, in addition to any other rights or remedies, any party may institute a legal action.

33. **SECTION HEADINGS:** The section headings contained herein are for convenience in reference and are not intended to define or limit the scope of any provision hereof.

34. **SIGNATURE OF PARTIES:** It is an express condition of this Permit that said Permit shall not be complete nor effective until signed by either the Executive Director or his authorized designee on behalf of District and by other party.

Port Attorney

By _____
DEPUTY PORT ATTORNEY

SAN DIEGO UNIFIED PORT DISTRICT

By _____
Dirk I. Mathiasen
Director of Maritime Operations and Properties

SAN DIEGO GAS & ELECTRIC COMPANY

By _____
Signature

PRINT NAME: David S. Siino

PRINT TITLE: Director, Real Estate & Facilities

EXHIBIT NO. "8"

Amendment No. 4 to lease between BAE Systems San Diego Ship Repair, Inc. and the San Diego Unified Port District, dated June 9, 2009

San Diego Unified Port District
Document No. 55329
Filed AUG 17 2009
Office of the District Clerk

AGREEMENT FOR AMENDMENT OF LEASE
AMENDMENT NO. 4

THIS AGREEMENT, made and entered into this 4th day of June, 2009, by and between the SAN DIEGO UNIFIED PORT DISTRICT, a public corporation, hereinafter called "Lessor," and BAE SYSTEMS SAN DIEGO SHIP REPAIR, INC., a California corporation, hereinafter called "Lessee," WITNESSETH:

WHEREAS, Lessor and Lessee (then known as Southwest Marine, Inc., a California corporation) entered on the 17th day of September, 1979 a Lease of certain tidelands in the city of San Diego, California, which Lease is on file in the Office of the Clerk of Lessor bearing Document No. 12223; and

WHEREAS, Lessor and Lessee (then known as Southwest Marine, Inc., a California corporation), on the 23rd day of April, 1985, entered into an Agreement for Amendment of Lease, Amendment No. 1, which Amendment is on file in the Office of the Clerk of Lessor bearing Document No. 18106; and

WHEREAS, Lessor and Lessee (then known as Southwest Marine, Inc., a California corporation), on the 18th day of November, 1997, entered into an Agreement for Amendment of Lease, Amendment No. 2, which Amendment is on file in the Office of the Clerk of Lessor bearing Document No. 36730; and

WHEREAS, Lessor and Lessee (then known as Southwest Marine, Inc., a California corporation), on the 6th day of January, 2004, entered into an Agreement for Amendment of Lease, Amendment No. 3, which Amendment is on file in the Office of the Clerk of Lessor bearing Document No. 46843; and

WHEREAS, effective June 28, 2005, Southwest Marine, Inc. changed its name to BAE Systems San Diego Ship Repair, Inc.; and

WHEREAS, Lessee assigned its interest in said Lease for security purposes on the 18th day of November, 1997 to Credit Lyonnais New York Branch, as Agent for the Lenders and the Issuing Bank under the Credit Agreement dated at or about November 25, 1997, which Assignment of Lessee's Interest in Lease for Security Purposes is on file in the Office of the Clerk of Lessor bearing Document No. 36733; and

WHEREAS, Lessor and Lessee are mutually desirous of further amending said Lease;

DUPLICATE - ORIGINAL

NOW THEREFORE, for valuable consideration, said Lease is hereby amended in the following respects and no others, and except as expressly amended, all terms, covenants and conditions of said Lease shall remain in full force and effect:

A. Said Lease is also hereby amended by amending Paragraph 2 to read as follows:

2. RENTAL: Lessee agrees to pay to Lessor rent in accordance with the following schedules and procedures:

(a) The annual rental commencing December 1, 2007 shall be the sum of Seven Hundred Ninety Eight Thousand Eight Hundred Eighty Four Dollars ($798,884) for the period December 1, 2007 through November 30, 2008; and Eight Hundred Twenty Thousand One Hundred Eighty Dollars ($820,180) for the period December 1, 2008 through November 30 2009; and the annual amount determined by subparagraph 2(b) below for the period December 1, 2009 through August 31, 2034. Said rent shall be payable in advance on or before the tenth (10th) day of each month.

(b) Rental commencing December 1, 2009 and each December 1 thereafter (hereinafter "Adjustment Date") for the remainder of the Lease Term shall be determined or adjusted as provided herein below.

On the Adjustment Date, the monthly rent in effective immediately preceding said Adjustment Date ("Base Rent") shall be adjusted by the increase, if any, in the Consumer Price Index for All Urban Consumers for Los Angeles/Riverside/Orange County, CA/All Items based on the period 1982-84 = 100 as published by the United States Department of Labor's Bureau of Labor Statistics, hereinafter "CPI."

The Base Rent shall be multiplied by a fraction, the numerator of which shall be the CPI for the calendar month which is three months prior to the Adjustment Date under consideration, and the denominator of which shall be the CPI for the calendar month which is three months prior to commencement of the then-current Base Rent. The sum so calculated shall constitute the new monthly rent herein, provided, however, that in no event shall such new monthly rent be less than two percent (2%) greater nor more than four percent (4%) greater than the Base Rent.

In the event the CPI is no longer published, the index for the Adjustment Date shall be the one reported in the U. S. Department of Labor's comprehensive official index most nearly corresponding to the foregoing description of the CPI. If the above-described Department of Labor indices are no longer published, another index generally recognized as authoritative shall be substituted by agreement of the parties. If they are unable to agree within sixty (60) days after demand by either party, a

substitute index will be selected by the Chief Officer of the San Francisco Regional Office of the Bureau of Labor Statistics or its successor.

Notwithstanding the publication dates of the CPI, the rent shall be adjusted to be effective on the Adjustment Dates. Until said rent adjustment can be reasonably determined by CPI publication, Lessee shall continue to make rental payments pursuant to this Lease at the Base Rent then in effect. Following such determination, underpayments of rent shall be immediately paid to the Lessor.

(c) All payments shall be delivered to Lessor's Treasurer. Checks shall be made payable to the San Diego Unified Port District and mailed to the Trasurer's Office, San Diego Unified Port District, Post Office Box 120488, San Diego, California 92112-0488, or delivered to the Treasurer's Office, San Diego Unified Port District, 3165 Pacific Highway, San Diego, California. Lessor may change the designated place of payment and filing at any time upon ten (10) days' written notice to Lessee. Lessee assumes all risk of loss and responsibility for late charges, as herein described, if payments are made by mail.

(d) Lessee hereby acknowledges that late payment by Lessee to Lessor of rent and other sums due hereunder will cause Lessor to incur costs not contemplated by this Lease. Accordingly, in the event Lessee is delinquent in remitting the rent due in accordance with the rent provisions of this Lease, Lessee shall pay, in addition to the unpaid rent ten percent (10%) of the delinquent rent ("Late Charges"). The parties hereby agree that said Late Charges are additional rent and are not interest, and that said Late Charges are appropriate to compensate Lessor for loss resulting from rent delinquency including, without limitation, lost opportunities and the cost of servicing the delinquent account. Acceptance of such late charges and any portion of the late payment by Lessor shall in no event constitute a waiver of Lessee's default with respect to such overdue amount, nor prevent Lessor from exercising any of its other rights and remedies. The Executive Director of Lessor shall have the right to waive for good cause any Late Charges upon written application of Lessee for any such delinquency period.

(e) All payments by Lessee to Lessor shall be by a good and sufficient check. No payment made by Lessee or receipt or acceptance by Lessor of a lesser amount than the correct amount of rent due under this Lease shall be deemed to be other than a payment on account of the earliest rent due hereunder, nor shall any endorsement or statement on any check or any letter accompanying any check or payment be deemed an accord and satisfaction, and Lessor may accept such check or payment without prejudice to Lessor's right to recover the balance or pursue any other available remedy.

ABSTRACT OF LEASE AMENDMENT NO. 4

B. ABSTRACT OF LEASE AMENDMENT NO. 4: This is the final Paragraph and Abstract of Agreement for Amendment of Lease, Amendment No. 4, dated June 9, 2009, between SAN DIEGO UNIFIED PORT DISTRICT, Lessor, and BAE SYSTEMS SAN DIEGO SHIP REPAIR, INC., Lessee, *concerning the Leased Premises described in Exhibits "A" and "B,"* attached hereto and by this reference made a part hereof.

For good and adequate consideration, Lessor leases the Leased Premises to Lessee, and Lessee hires them from Lessor, for the term and on the provisions contained in Lease dated September 17, 1979, which Lease is on file in the Office of the Clerk of Lessor bearing Document No. 12223; as amended by Agreement for Amendment of Lease, Amendment No. 1, which Amendment is on file in the Office of the Clerk of Lessor bearing Document No. 18106; Agreement for Amendment of Lease, Amendment No. 2, which Amendment is on file in the Office of the Clerk of Lessor bearing Document No. 36730; and Amendment of Lease, Amendment No. 3, which Amendment is on file in the Office of the Clerk of Lessor bearing Document No. 46843; including without limitation provisions prohibiting assignment, subleasing, and encumbering said leasehold without the express written consent of Lessor in each instance, all as more specifically set forth in said Lease and said Lease amendments, which are incorporated in this Abstract by this reference.

The term is fifty (50) years, beginning September 1, 1984, and ending on August 31, 2034. This Lease Amendment No. 4 shall become effective as of June 9, 2009].

This Abstract is not a complete summary of the Lease Amendment. Provisions in this Abstract shall not be used in interpreting the Lease Amendment provisions. In the event of conflict between this Abstract and other parts of the Lease Amendment, the other parts shall control. Execution hereof constitutes execution of the Lease Amendment itself.

DATED: August 12, 2009

Port Attorney

By _____

DEPUTY PORT ATTORNEY

APPROVED AS TO FORM
SENIOR COUNSEL

SAN DIEGO UNIFIED PORT DISTRICT

By _____
Title: Real Estate Director

BAE SYSTEMS SAN DIEGO SHIP REPAIR, INC.

By _____
Signature

PRINT NAME: Robert A. Kilpatrick

PRINT TITLE: VP & General Manager II

DM5#357399

EXHIBIT NO. "9"

BAE Stipulation Regarding Resolution of Discovery Dispute, dated March 9, 2011

William D. Brown, Esq., (SBN 125468)
Wentzelee Botha, Esq., (SBN 207029)
BROWN & WINTERS, LLP
120 Birmingham Drive, Suite 110
Cardiff-by-the-Sea, CA 92007
Telephone: (760) 633-4485
Facsimile: (760) 633-4427
E-mail: bbrown@brownandwinters.com
wbotha@brownandwinters.com

Duane E. Bennett, Esq., Port Attorney (SBN 110202)
Leslie A. FitzGerald, Esq., Deputy Port Attorney
(SBN 149373)
SAN DIEGO UNIFIED PORT DISTRICT
3165 Pacific Highway
P. O. Box 120488
San Diego CA 92112
Telephone: (619) 686-6219
Facsimile: (619) 686-6444
E-mail: dbennett@portofsandiego.org
lfitzgerald@portofsandiego.org

Attorneys for Designated Party
SAN DIEGO UNIFIED PORT DISTRICT

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

In re Tentative Cleanup and Abatement Order No. R9-2011-0001 (formerly No. R9-2010-0002) (Shipyard Sediment Site)	**STIPULATION REGARDING RESOLUTION OF DISCOVERY DISPUTE** Presiding Officer: Grant Destache

WHEREAS, on November 23, 2010, the San Diego Unified Port District ("Port District") served BAE SYSTEMS SAN DIEGO SHIP REPAIR INC. and SOUTHWEST MARINE, INC. ("BAE") with Special Interrogatories, Requests for Production of Documents and Requests for Admissions (collectively, the "Written Discovery") in the above-referenced proceeding, seeking information regarding BAE's financial resources and insurance assets;

WHEREAS, on December 6, 2010, BAE objected to a number of the Port District's Written Discovery requests on various grounds;

WHEREAS, on March 1, 2011, the Port District served BAE with two notices of deposition of BAE's person(s) most knowledgeable, and associated document requests, related generally to BAE's financial assets and insurance coverage, respectively (the "Deposition Notices");

WHEREAS, the Port District and BAE now wish to resolve their dispute regarding the Written Discovery and Deposition Notices and any other discovery that could otherwise be served by the Port District, against BAE, in the above-captioned proceeding, related to BAE's financial assets or insurance coverage;

NOW THEREFORE, the Port District and BAE hereby stipulate and agree, through their undersigned counsel below, as follows:

1. BAE stipulates that it has the financial assets to cover any amounts of the cleanup and remedial monitoring under Tentative Cleanup and Abatement Order No. R9-2011-0001 ("Tentative Order") which are premised upon BAE's established liability for the time period 1979 to the present with respect to the BAE leasehold only and that are ultimately allocated to BAE. This stipulation is not an admission or agreement by BAE that it is liable for any of the cleanup or monitoring requirements that may be imposed under the Tentative Order.

2. In exchange, the Port District will withdraw its pending Deposition Notices against BAE, will not file a motion seeking to compel the depositions or further responses to the Written Discovery, and will agree not to serve any other discovery against BAE in the above-captioned proceeding relating to BAE's financial assets or insurance coverage.

IT IS SO STIPULATED.

Dated: March 9, 2011

DLA PIPER LLP (US)

By: _____

MICHAEL S. TRACY
MATTHEW B. DART
Attorneys for BAE SYSTEMS SAN DIEGO SHIP REPAIR INC., and SOUTHWEST MARINE, INC.

Dated: March 9, 2011

SAN DIEGO UNIFIED PORT DISTRICT

By _____
for WILLIAM D. BROWN
WENTZELEE BOTHA
Attorneys for SAN DIEGO UNIFIED PORT DISTRICT

EXHIBIT NO. "10"

Summary of BAE Systems San Diego Ship Repair, Inc./Southwest Marine, Inc. Historic Liability Insurance Coverage

Summary of BAE Systems San Diego Ship Repair, Inc./Southwest Marine, Inc. Historic Liability Insurance Coverage

Policy Number	Policy Period	Policy Limits
Fireman's Fund American Group policy number 795LA2892073	1/17/80-10/16/81	$500K
Commercial Union Insurance Company policy number D959509	7/21/78-5/1/81	$500K
American Home Assurance Company policy number 2456	1/1/79-1/1/80	$5M excess of $500K
Pacific Mutual Marine Office policy number 60436	1/1/78-1/1/79	$5M excess of $500K
Industrial Indemnity policy number L12986201	10/16/81-9/1/82	$500K
Continental Insurance Company policy number EXC 100398	1/1/80-1/1/81	$10M excess of $500K
[redacted]	[redacted]	[redacted]
Continental Insurance Company policy number EXC 100948	1/1/82-1/1/83	$10M excess of $500K
American Home Assurance Company policy number AH 3884	1/1/83-1/1/84	$10M excess of $500K
American Home Assurance Company policy number AH 3995	1/1/84-1/1/85	$10M excess of $500K
American Home Assurance Company policy number AH 4179	1/1/85-1/1/86	$10M excess of $1M
Lloyd's of London policy number RGA 121	2/1/85-2/1/86	$20M excess of $1M
Industrial Indemnity policy number IL852-1135	6/1/85-6/1/86	$1M

Industrial Indemnity policy number SG8806431	6/1/86-6/1/87	$1M
Industrial Indemnity policy number SG8830057	6/1/87-6/1/88	$1M
Lloyds of London policy number MV1338E00	6/1/88-6/1/89	$1M
Lloyds of London policy number MV8066F	6/1/89-6/1/90	$1M

EXHIBIT NO. "11"

NASSCO Stipulation Regarding Resolution of Discovery Dispute, dated March 3, 2011

LATHAM & WATKINS LLP
Robert M. Howard (Bar No. 145870)
Kelly E. Richardson (Bar No. 210511)
Jeffrey P. Carlin (Bar No. 227539)
Ryan R. Waterman (Bar No. 229485)
Jennifer P. Casler (Bar No. 259438)
600 West Broadway, Suite 1800
San Diego, California 92101-3375
Telephone: (619) 236-1234
Facsimile: (619) 696-7419

Attorneys for Designated Party
NATIONAL STEEL AND SHIPBUILDING COMPANY

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

In re Tentative Cleanup and Abatement Order No. R9-2011-0001	**STIPULATION REGARDING RESOLUTION OF DISCOVERY DISPUTE**

WHEREAS, on February 9, 2011, the San Diego Unified Port District ("Port District") served National Steel & Shipbuilding Company ("NASSCO") with two notices of deposition of NASSCO's person(s) most knowledgeable, and associated document requests, related generally to NASSCO's financial assets and insurance coverage, respectively (the "Deposition Notices");

WHEREAS, on February 18, 2011, NASSCO objected to the Port District's Deposition Notices in their entirety, on various grounds, and refused to produce witnesses in response to the Deposition Notices;

WHEREAS, the Port District and NASSCO now wish to resolve their dispute regarding the Deposition Notices and any other discovery that could otherwise be served by the Port District, against NASSCO, in the above-captioned proceeding, related to NASSCO's financial assets or insurance coverage;

NOW THEREFORE, the Port District and NASSCO hereby stipulate and agree,

through their undersigned counsel below, as follows:

1. NASSCO stipulates that it has the financial assets to cover the amounts of the cleanup and remedial monitoring under Tentative Cleanup and Abatement Order No. R9-2011-0001 ("Tentative Order") that are ultimately allocated to NASSCO. This stipulation is not an admission or agreement by NASSCO that it is liable for any of the cleanup or monitoring requirements that may be imposed under the Tentative Order.

2. In exchange, the Port District will withdraw its pending Deposition Notices against NASSCO, will not file a motion seeking to compel the depositions, and will agree not to serve any other discovery against NASSCO in the above-captioned proceeding relating to NASSCO's financial assets or insurance coverage.

IT IS SO STIPULATED.

Dated: March 3, 2011

LATHAM & WATKINS LLP

By _____
KELLY E. RICHARDSON
JEFFREY P. CARLIN
Attorneys for NATIONAL STEEL & SHIPBUILDING COMPANY

Dated: March 3, 2011

SAN DIEGO UNIFIED PORT DISTRICT

By _____
WILLIAM D. BROWN
WENTZELEE BOTHA
Attorneys for SAN DIEGO UNIFIED PORT DISTRICT

EXHIBIT NO. "12"

Summary of National Steel and Shipbuilding Company Historic Liability Insurance Coverage

Summary of National Steel and Shipbuilding Company Historic Liability Insurance Coverage

Policy Number	Policy Period	Policy Limits
Glen Falls Insurance Co. policy number CL 137424	8/14/57-8/1/58	$100k p.a./agg.
Glen Falls Insurance Co. policy number CL 141345	8/1/58-8/14/59	$100k p.a./agg.
Glen Falls Insurance Co. policy number PCL 153837	8/14/60-8/14//61	$100K p.a./agg.
Travelers Insurance Co. policy number SL-9604803	8/14/61-8/14/62	$100K p.a/agg.
Travelers Insurance Co. policy number NSL-1405642	8/14/63-8/14/64	$100K p.a./agg.
Travelers Insurance Co. policy number NSL-1913271	8/14/64-8/14/65	$100k p.a./agg.
Ins. Co. of North America policy number MLP 102349	8/14/66-9/1/66	$500k p.o./agg.
Ins. Co. of North America policy number AGP 13178	9/1/66-Until Canceled	$500k p.o./agg.
Hartford Fire Insurance policy number 57 CBP A89900E	1/1/71-1/1/74	$100k p.o./agg.
Hartford Fire Insurance policy number 57 CBP A89901E	1/1/74-10/26/74	$100k p.o./agg.
Truck Insurance Exchange	10/30/74-10/30/79	$100k p.o./agg.
California Union Insurance policy number ZCX 00 1300	12/26/73-4/30/79	$500k excess of $100k

California Union Insurance policy number ZCX 00 3365	11/2/78-11/2/79	$500k excess of $100k
Insurance Company of North America policy number ISL 1058	2/1/79-2/1/80	$1m p.o./agg.
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
Aetna Insurance Company policy number 81 AL 802132 SCA	4/1/80-4/1/82	$100k
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
Aetna Insurance Company policy number 81 AL 320246 SCA	4/1/86-4/1/89	$100k
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
Aetna Insurance Company policy number 81 GL 5001298	4/1/89-4/1/90	$100k

EXHIBIT NO. "13"

Summary of San Diego Gas & Electric Historic Liability Insurance Coverage

Summary of San Diego Gas & Electric Historic Liability Insurance Coverage

Policy Number	Policy Period	Policy Limits	SIR
Continental Casualty Company policy number RD 9970585	1/1/64-1/1/67	$1 M to $6 M	$1 M
Reserve Insurance Company policy number GA 985-1014	1/1/67-10/7/67	$50K to $1.05 M	$50,000
Employer's Surplus Lines Insurance Company policy number E 512982	10/7/67-10/7/70	$50K to $1.05 M	$50,000
Harbor Insurance Company policy number 104537	1/1/67-1/1/70	$1.05 M to $5.05 M	$50,000
Employer's Surplus Lines Insurance Company policy number E 512495	1/1/67-1/1/70	$5.05 M to $30.05 M	$50,000
Harbor Insurance Company policy number 108461	1/1/70-1/1/73	$100K to $1.1 M	$100,000
American Home Assurance Company policy number CE 35-53-01	1/1/70-1/1/73	$1.1 M to $5.1 M	$100,000
Harbor Insurance Company policy number 108462	1/1/70-1/1/73	$5.1 M to $17.1 M	$100,000
Harbor Insurance Company policy number 114150	1/1/73-1/1/76	$100K to $1.1 M	$100,000

Harbor Insurance Company policy number 121214	4/15/75-1/1/76	$1.1 M to $5.1 M (quota share)	$100,000
Harbor Insurance Company policy number 114151	1/1/73-1/1/76	$5.1 M to $25.1 M	$100,000
General Assurance Services, Ltd. policy number O22	1/1/76-1/1/79	$100K to $1.1 M	$100,000
The North River Insurance Company policy number XS 4055	1/1/76-1/1/77	$1.1 M to $5.1 M	$100,000
London Market Insurers policy number SF2602	1/1/76-1/1/77	$5.1 M to $10.1 M	$100,000
The North River Insurance Company policy number XS 4078	1/1/77-1/1/78	$1.1 M to $5.1 M	$100,000
London Market Insurers policy number SF2650	1/1/77-1/1/78	$5.1 M to $10.1 M	$100,000
London Market Insurers policy number LIA1457	1/1/78-1/1/79	$1.1 M to $25.1 M	$100,000
General Assurance Services, Ltd. policy number O22	1/1/79-1/1/81	$250K to $15.25 M	$250,000
Associated Electric & Gas Insurance Services, Ltd. policy number O22A	1/1/81-7/1/83	$250K to $25.25 M	$250,000
Associated Electric & Gas Insurance Services, Ltd. policy	7/1/83-1/1/84	$250K to $25.25 M	$250,000

number O22 NJ			
Associated Electric & Gas Insurance Services, Ltd. policy number O22 ANJ	1/1/84-12/1/85	$250K to $25.25 M	$250,000
Associated Electric & Gas Insurance Services, Ltd. policy number O22 CNJ	12/1/85-12/1/86	$1M to $21 M	$1,000,000

EXHIBIT NO. "14"

Summary of Campbell Industries, Inc. Historic Liability Insurance Coverage

Summary of Campbell Industries, Inc. Historic Liability Insurance Coverage

Policy Number	Policy Period	Policy Limits	Remaining Limits
Insurance Company of North America policy number GAL 114233	6/1/72-6/1/73	$100K	$69,219.31
Insurance Company of North America policy number GAL 114233	6/1/73-8/1/73	$100K	$16,666.66
CNA policy number CCP 9031908	8/1/73-8/1/74	$100K	$100k
CNA policy number CCP 9031908	8/1/74-11/21/74	$100K	$100k
INA policy number GAL 376205	11/21/77-1/1/78	$500K	$401,037.50
INA policy number GAL 392130	1/1/78-1/1/79	$500K	$384,037.50
Transport Indemnity policy number TUL 675004	10/1/73-10/1/74	$2M excess of $300K	$2M
Transport Indemnity policy number TUL 675004	10/1/74-10/1/75	$2M excess of $300K	$2M
Transport Indemnity policy number TUL 675004	10/1/75-10/1/76	$2M excess of $300K	$2M
Mutual Marine policy number MM 51151	1/1/76-1/1/77	$5M excess of $300K	$5M
Arkwright-Boston Manufacturers Mutual Insurance Company	1/78-1/79	$5M excess of $500K	$5M

policy number PMMO 60422			
Employer Mutual Casualty Co. policy number PMMO 60714	1/1/79-1/1/80	$5M excess of $500K	$5M
Lloyds of London policy number OMCGL150001	5/1/80-5/1/81	$1M	$1M
Lloyds of London policy number OMCGL150005	5/1/81-5/1/82	$500K	$500K
Lloyds of London policy number OMCGL150011	5/1/81-5/1/82	$1M over $500K	$1M
Lloyds of London policy number OMCGL150010	5/1/82-5/1/83	$100K	$100K
Lloyds of London policy number OMUMB 10-00-17	5/1/82-5/1/83	$1M over $100K	$1M
National Union Fire Insurance Company of Pittsburgh, PA policy number EGA1157862	5/1/83-5/1/84	$500K	$500K
National Union Fire Insurance Company of Pittsburgh, PA policy number GLA1168081RA	9/1/84-9/1/85	$1M	$1M
Arkwright-Boston policy number PMMO 62178	9/1/85-9/1/86	$10M excess of $1M	$10M
North Pacific Insurance Co. policy	9/1/86-9/1/87	$1M	$1M

number 85 CB 1004			
Arkwright-Boston policy number PMMO 62357	9/1/86-9/1/87	$1M excess of $100K	$1M
Lloyds of London policy numbers 88/2001/041 & AP81-140-0002	9/1/88/-9/1/89	$1M	$1M

EXHIBIT NO. "15"

Summary of Star & Crescent Boat Company Historic Liability Insurance Coverage

Summary of Star & Crescent Boat Company Historic Liability Insurance Coverage

Policy Number	Policy Period	Policy Limits
Royal Indemnity Company policy number CEX 100011	10/1/45-10/1/51	$5K
Fireman's Fund policy number PC9-266853	7/1/57-2/9/59	$10K p.a./agg.
Industrial Indemnity Company policy number LG 700329	11/13/58-7/1/60	$10K p.a./agg.
Continental Casualty Company policy number RD 9905686	7/1/57-7/1/60	$2M excess of $10K
Industrial indemnity Company policy number LG 700665	7/1/60-10/1/61	$50K p.a./agg.
Industrial indemnity Company policy number LG 700665	11/13/61-10/1/63	$50K p.a./agg.
Continental Casualty Company policy number RDX 9997215	7/1/60-7/1/63	$1.95M excess of $50K
Pacific Indemnity Company policy number LAC 157246	1/1/63-10/1/66	$25K p.a./agg.
Lloyds of London policy number LC 59636	10/1/63-10/1/66	$1.975M excess of $25K
Pacific Indemnity Company policy number CMP 22916	10/1/66-10/1/69	$50K p.a./agg.
Ins. Co. of the State of the Pennsylvania 4260835	10/1/66-10/1/69	$1.95M excess of $50k
Pacific Indemnity Company policy number CMP 31802	10/1/69-10/1/72	$100K p.o./agg.
California Union Insurance Company policy number X005041	10/1/69-10/1/70	$150K p.o./agg.

Ins. Co. of the State of the Pennsylvania 4291031	10/1/69-10/1/72	$1.75M CSL / excess of $250k
Pacific Indemnity Company policy number LAC 212655	10/1/72-10/1/73	$100K p.o./agg.
Insurance Co. of the State of Penn. policy number 4272-2053	10/1/72-10/1/75	$2.5M excess of $500K
Pacific Indemnity Company policy number LAC (74) 98094367	9/26/74-11/1/74	$100K p.o. / $1.1m CSL
Central National Insurance Company of Omaha policy number CNS093402	11/1/74-11/1/75	$500K p.o.
Central National Insurance Company of Omaha policy number CNU 123252	10/1/75-10/1/78	$3M
Central National Insurance Company of Omaha policy number CNS 93905	10/30/75-1/1/77	$500K CSL
Insurance Co. of the West policy number ADD270879	3/29/77-3/10/78	$100K
Central National Insurance Company of Omaha policy number CNS 94183	3/29/77-2/1/78	$500K CSL
Central National Insurance Company of Omaha policy number CNU 127212	3/29/77-3/29/78	$500K CSL
Centennial Ins. Co. policy number 291 69 32 07	3/16/78-3/16/81	$500K CSL
Central National Insurance Company of Omaha policy number CNU 03-61-62	5/27/80-3/16/81	$600K p.o.
Centennial Ins. Co. policy number 291-70-91-60	3/22/82-3/16/84	$500K

Industrial Indemnity policy no. LC 819-7095	5/22/81-3/16/82	$100K / $1.1M CSL
Federal Insurance Company policy no. MP35227484	3/16/83-3/15/84	$500K p.o./agg.
United Pacific/Reliance policy no. LP 4485478	3/15/84-3/15/85	$100K p.o./$1.1M agg.
Ins. Co. of the West policy no. CSD533764	11/6/87-7/15/88	$100K p.o./$1.1M agg.
St. Paul Fire & Marine Ins. Co. policy no. 312 FA 7451 a/o 312 FA 7462	11/6/87-7/15/88	$100K p.o./$1.1M agg.

EXHIBIT NO. "16"

Star & Crescent Boat Company Stipulation Regarding Resolution of Discovery Dispute dated May 17, 2011

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Wentzelee Botha, Esq., (SBN 207029)
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Attorneys for Designated Party
SAN DIEGO UNIFIED PORT DISTRICT

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

In re Tentative Cleanup and Abatement Order No. R9-2011-0001	**STIPULATION REGARDING RESOLUTION OF DISCOVERY DISPUTE** Presiding Officer: Grant Destache

WHEREAS, on November 23, 2010, the San Diego Unified Port District ("Port District") served Star & Crescent Boat Company ("S&C") with Special Interrogatories, Requests for Production of Documents and Requests for Admissions (collectively, the "Written Discovery") in the above-referenced proceeding, seeking information regarding S&C's financial resources and insurance assets;

WHEREAS, on December 3, 2010, S&C objected to a number of the Port District's Written Discovery requests on various grounds;

WHEREAS, the Port District and S&C now wish to resolve their dispute regarding the Written Discovery related to S&C's financial assets or insurance coverage;

NOW THEREFORE, the Port District and S&C hereby stipulate and agree, through their undersigned counsel below, as follows:

1. S&C stipulates that it has ~~in excess of~~ $ As of May 16, 2011, $750,000 - $1,000,000 in financial assets available to cover any amounts of the cleanup and remedial monitoring under Tentative Cleanup and Abatement Order No. R9-2011-0001 ("Tentative Order") that are ultimately allocated to S&C. This stipulation is not an admission or agreement by S&C that it is liable for any of the cleanup or monitoring requirements that may be imposed under the Tentative Order and is subject to change based upon business conditions.

2. S&C further stipulates that it will amend its responses to Request for Admissions, Set One, propounded by the Port, to admit that it has tendered the insurance policies listed below, and to the best of S&C's knowledge, the policies have not been sold back to the insurance carriers or had their coverage limits otherwise compromised:

Insurance Carrier	Policy Number	Coverage Period
Old Republic Insurance Company	OM 2267	Unknown - 9/30/76
Highlands Ins. Co. (80%) and Northwestern National (20%)	J&H-LA-090	Unknown
Insurance Co. of the State of Pennsylvania	4272-2053	10/1/72-10/1/75
Central National Insurance Company of Omaha	CNS093402	11/1/74-11/1/75
Central National Ins. Co., of Omaha	CNU123252	10/1/75-10/1/78
Centennial Insurance Co.	291 69 32 07	3/16/78-3/16/81
Central National Ins. Co., of Omaha	CNU 036162	5/27/80-3/16/81
Industrial Indemnity Company	LC 819-7095	5/22/81-3/16/82
Centennial Insurance Co.	291-70-91-60	5/22/81-3/16/84
Federal Insurance Company	MP35227484	3/16/83-3/15/84
United Pacific/ Reliance	LP 4485478	3/15/84-3/15/85
Insurance Company of the West	CSD533764	11/6/87-7/15/88
St. Paul Fire & Marine Ins. Co.	312 FA 7461 a/o 312 FA 7462	11/6/87-7/15/88

3. In exchange for the foregoing, the Port District will not file a motion seeking to compel further responses to the Written Discovery.

IT IS SO STIPULATED.

Dated: May 17, 2011

SCHWARTZ SEMERDJIAN BALLARD & CAULEY, LLP

By: _____
SARAH BRITE EVANS
Attorneys for STAR & CRESCENT BOAT COMPANY

Dated: May 17, 2011

SAN DIEGO UNIFIED PORT DISTRICT

By _____
WILLIAM D. BROWN
WENTZELEE BOTHA
Attorneys for SAN DIEGO UNIFIED PORT DISTRICT

EXHIBIT NO. "17"

Cleanup Team responses to the San Diego Unified Port District's Special Interrogatories Nos. 28 and 30, dated January 5, 2010

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

In the matter of Tentative Cleanup and Abatement Order No. R9-2011-0001 (Formerly R9-2010-0002) Shipyard Sediment Cleanup	Regional Board Cleanup Team's Responses & Objections to Designated Party San Diego Unified Port District's First Set of Special Interrogatories

Propounding Party: San Diego Unified Port District (the "Port")

Responding Party: California Regional Water Quality Control Board, San Diego Region Cleanup Team

Set Number: One (1)

Pursuant to the Presiding Officer's February 18, 2010 Order Issuing Final Discovery Plan for Tentative Cleanup and Abatement Order No. R9-2010-0002 and Associated Draft Technical Report, the Presiding Officer's October 27, 2010 Order Reopening Discovery Period, Establishing Discovery Schedule, and Identifying Star and Crescent Boat Company as a Designated Party for Purposes of Tentative Cleanup and Abatement Order R9-2011-0001 (the "10.27.10 Order"), the Parties' August 9, 2010 Stipulation Regarding Discovery Extension and all applicable law, Designated Party the San Diego Water Board Cleanup Team ("Cleanup Team"), hereby responds and objects to the Port's First Set of Special Interrogatories ("Interrogatories") as follows:

The instant Cleanup and Abatement Order proceeding is ongoing, and the Cleanup Team expects that additional evidence will be provided by the Designated Parties hereto in accordance with governing statutes, regulations and applicable hearing procedures. While the Cleanup Team's response to each of these Interrogatories is based on a reasonable investigation and the state of its knowledge as of this date, additional information may be made available to or otherwise obtained by the Cleanup Team subsequent to the date of this response. These responses are provided without prejudice to the Cleanup Team's right to supplement these responses, or to use in this proceeding any testimonial, documentary, or other form of evidence or facts yet to be discovered, unintentionally omitted, or within the scope of the objections set forth herein.

Subject to and without waiving the preceding objections, the Cleanup Team responds as follows: All responsive, non-privileged documents have already been provided to the Port and/or are otherwise in its possession, custody and control. The Cleanup Team will not prepare a compilation or abstract of information available in these documents since the burden on the Cleanup Team of so doing is equal or greater than that on the Port.

SPECIAL INTERROGATORY NO. 28:

Set forth each and every fact that YOU contend supports YOUR allegations in the CURRENT TCAO and CURRENT DTR that the Port District manages or operates the portion of the City of San Diego's MS4 SYSTEM that drains to Storm Water Outfall SW4 at the SITE.

RESPONSE TO INTERROGATORY NO. 28:

The Cleanup Team incorporates each of the General Objections set forth above as if set forth in full herein. The Cleanup Team further objects to this Interrogatory to the extent it requests information protected by the attorney-client privilege, joint prosecution privilege, common interest privilege, mediation privilege, official information privilege and/or deliberative process privilege, and to the extent it requests information subject to

the work-product exemption, collectively referred to herein as the "privilege" or "privileged." The Cleanup Team contends that all communications exchanged between it and its counsel are privileged. The Cleanup Team objects to identifying or producing any and all products of investigations or inquiry conducted by, or pursuant to the direction of counsel, including, but not limited to, all products of investigation or inquiry prepared by the Cleanup Team in anticipation of this proceeding, based on the attorney-client privilege and/or the work-product doctrine. The Cleanup Team further objects to providing information subject to or protected by any other privilege, including, but not limited to, settlement communications, the joint prosecution privilege, the common interest privilege, the mediation privilege, the official information privilege and/or the deliberative process privilege. Inadvertent provision of privileged information shall not constitute a waiver of said privileges.

The Cleanup Team further objects to this Interrogatory because it purports to impose requirements and discovery obligations other than those set forth in Title 23 of the California Code of Regulations, sections 648 et seq., the California Government Code, sections 11400 et seq. and/or applicable stipulations, agreements and/or orders governing this proceeding, including, but not limited to, the limitations on the proper scope of discovery set forth in the 10.27.10 Order.

The Cleanup Team further objects that this Interrogatory is not full and complete in and of itself, is overbroad, and is framed in a manner that prevents any reasonable ability to provide responsive information. The Cleanup Team further objects to this Interrogatory on the ground that the term "City of San Diego's MS4 SYSTEM" is vague and ambiguous. The Cleanup Team further objects to this Interrogatory on the ground that it improperly calls for legal interpretation or consideration, and/or a legal conclusion.

The instant Cleanup and Abatement Order proceeding is ongoing, and the Cleanup Team expects that additional evidence will be provided by the Designated Parties hereto in accordance with governing statutes, regulations and applicable hearing procedures. While the Cleanup Team's response to each of these

Interrogatories is based on a reasonable investigation and the state of its knowledge as of this date, additional information may be made available to or otherwise obtained by the Cleanup Team subsequent to the date of this response. These responses are provided without prejudice to the Cleanup Team's right to supplement these responses, or to use in this proceeding any testimonial, documentary, or other form of evidence or facts yet to be discovered, unintentionally omitted, or within the scope of the objections set forth herein.

Subject to and without waiving the preceding objections, the Cleanup Team responds as follows: The CURRENT TCAO and CURRENT DTR do not allege that the Port District manages or operates the portion of the City of San Diego's MS4 that drains to SW4. The Port District is responsible for controlling pollutants into and from its own MS4 system. However, the Port District cannot passively allow pollutants to be discharged through its MS4 and into another Copermittees' MS4s, like the City of San Diego. The Port District is required by Section C.1.g of the current MS4 Permit to control the contribution of pollutants from one portion of a shared MS4 to another portion.

SPECIAL INTERROGATORY NO. 29:

IDENTIFY each and every DOCUMENT that YOU contend supports YOUR allegations in the CURRENT TCAO and CURRENT DTR that the Port District manages or operates the portion of the City of San Diego's MS4 SYSTEM that drains to Storm Water Outfall SW4 at the SITE.

RESPONSE TO INTERROGATORY NO. 29:

The Cleanup Team incorporates each of the General Objections set forth above as if set forth in full herein. The Cleanup Team further objects to this Interrogatory to the extent it requests information protected by the attorney-client privilege, joint prosecution privilege, common interest privilege, mediation privilege, official information privilege and/or deliberative process privilege, and to the extent it requests information subject to the work-product exemption, collectively referred to herein as the "privilege" or

SPECIAL INTERROGATORY NO. 30:

Set forth each and every fact that YOU contend supports YOUR allegations in the CURRENT TCAO and CURRENT DTR that the Port District manages or operates the portion of the City of San Diego's MS4 SYSTEM that drains to Storm Water Outfall SW9 at the SITE.

RESPONSE TO INTERROGATORY NO. 30:

The Cleanup Team incorporates each of the General Objections set forth above as if set forth in full herein. The Cleanup Team further objects to this Interrogatory to the extent it requests information protected by the attorney-client privilege, joint prosecution privilege, common interest privilege, mediation privilege, official information privilege and/or deliberative process privilege, and to the extent it requests information subject to the work-product exemption, collectively referred to herein as the "privilege" or "privileged." The Cleanup Team contends that all communications exchanged between it and its counsel are privileged. The Cleanup Team objects to identifying or producing any and all products of investigations or inquiry conducted by, or pursuant to the direction of counsel, including, but not limited to, all products of investigation or inquiry prepared by the Cleanup Team in anticipation of this proceeding, based on the attorney-client privilege and/or the work-product doctrine. The Cleanup Team further objects to providing information subject to or protected by any other privilege, including, but not limited to, settlement communications, the joint prosecution privilege, the common interest privilege, the mediation privilege, the official information privilege and/or the deliberative process privilege. Inadvertent provision of privileged information shall not constitute a waiver of said privileges.

The Cleanup Team further objects to this Interrogatory because it purports to impose requirements and discovery obligations other than those set forth in Title 23 of the California Code of Regulations, sections 648 et seq., the California Government Code, sections 11400 et seq. and/or applicable stipulations, agreements and/or orders governing this proceeding, including, but not limited to, the limitations on the proper

scope of discovery set forth in the 10.27.10 Order.

The Cleanup Team further objects that this Interrogatory is not full and complete in and of itself, is overbroad, and is framed in a manner that prevents any reasonable ability to provide responsive information. The Cleanup Team further objects to this Interrogatory on the ground that the term "City of San Diego's MS4 SYSTEM" is vague and ambiguous. The Cleanup Team further objects to this Interrogatory on the ground that it improperly calls for legal interpretation or consideration, and/or a legal conclusion.

The instant Cleanup and Abatement Order proceeding is ongoing, and the Cleanup Team expects that additional evidence will be provided by the Designated Parties hereto in accordance with governing statutes, regulations and applicable hearing procedures. While the Cleanup Team's response to each of these Interrogatories is based on a reasonable investigation and the state of its knowledge as of this date, additional information may be made available to or otherwise obtained by the Cleanup Team subsequent to the date of this response. These responses are provided without prejudice to the Cleanup Team's right to supplement these responses, or to use in this proceeding any testimonial, documentary, or other form of evidence or facts yet to be discovered, unintentionally omitted, or within the scope of the objections set forth herein.

Subject to and without waiving the preceding objections, the Cleanup Team responds as follows: The CURRENT TCAO and CURRENT DTR do not allege that the Port District manages or operates any portion of the City of San Diego's MS4. The Port District is responsible for controlling pollutants into and from its own MS4. However, the Port District cannot passively allow pollutants to be discharged through its MS4 and into another Copermittees' MS4, like the City of San Diego. The Port District is required by Section C.1.g of the current MS4 Permit to control the contribution of pollutants from one portion of a shared MS4 to another portion.

EXHIBIT NO. "18"

Drainage Easement between the City of San Diego and the San Diego Unified Port District, dated April 24, 1985

PROPERTY FILE RECORD
LE No. 89-127
ROUTE TO:
1. CCT 2. ENG.
RETURN AS SOON AS POSSIBLE

SAN DIEGO UNIFIED PORT DISTRICT
Document No. 18104
Filed
Office of the Clerk

EASEMENT AND QUITCLAIM DEED

SAN DIEGO UNIFIED PORT DISTRICT, a public corporation, hereinafter called "Grantor," for valuable consideration, receipt of which is hereby acknowledged hereby grants to the CITY OF SAN DIEGO, a municipal corporation, hereinafter called "Grantee," a drainage easement. Said easement shall be for the purposes of construction, operation, maintenance, repair, replacement and inspection of a storm drain placed below the level of the surface of the ground and necessary above ground fixtures and appurtenances as approved by District within that portion of Grantor's land situated in the County of San Diego, State of California, and more particularly described on Exhibit "A" and delineated on City of San Diego Drawing No. 15878-1-B dated March 8, 1984, and Drawing No. 15878-2-B dated March 8, 1984. Said exhibit and drawings are attached hereto and by this reference made a part hereof.

1. Grantee shall have ingress and egress to and along the land described above via practical routes across adjacent land of Grantor, said routes to be determined by Grantor from time to time.

2. In the event Grantee disturbs the surface of the easement area during the installation, construction, maintenance and/or repair of the necessary facilities, Grantee shall do so in such a manner as will cause the least injury to the surface of the ground and any improvements thereon. Grantee shall restore the ground and any improvements thereon to substantially the same conditions as existed immediately prior to any such disturbance.

3. Grantor expressly reserves the right to grant easement in, upon, over and across the easement granted herein for any purpose whatever not inconsistent or incompatible with the rights and privileges granted by said easement. Nothing herein contained shall be construed as limiting the powers of Grantor to convey or otherwise transfer or encumber during the term of this easement the lands described herein for any purposes subject to the rights and privileges granted herein. The easement granted herein shall be subject to all existing rights of leases and encumbrances, recorded and unrecorded, affecting said land.

4. It is understood and agreed that in the event all or a part of the above described facilities should interfere with Grantor's

DUPLICATE ORIGINAL

future use, redevelopment, construction, or improvements on said property, at Grantor's request, all or a part of said facilities will be relocated to a position on Grantor-owned property which may, but shall not necessarily be, the above described property; provided, however, the Grantor will not request the relocation of any one part of said facility more than one time. Grantor shall not be unreasonable in specifying new locations for said facilities. Said relocations shall be made at no expense to said Grantee; and Grantor further agrees to grant easements to Grantee for the permanent relocated portions at no expense to Grantee.

5. No construction or major repairs of any facilities shall commence without prior approval of the plans and specifications by Grantor, except for necessary emergency repairs. In the case of emergency repairs, Grantee will give Grantor written notification within 10 days from the commencement of the emergency repair and will obtain Grantor's approval within 90 days from the commencement of the emergency repair. Facilities installed pursuant to this agreement shall be constructed in a careful and workmanlike manner and shall conform to all applicable laws and regulations.

6. Grantee shall at all times indemnify and save harmless Grantor against and pay in full any and all loss, damage, or expense that Grantor may sustain, incur, or become liable for, resulting in any manner from the construction, maintenance, state of repair or presence of Grantee's facilities and all fixtures and equipment used in connection therewith, including any such loss, damage, or expense arising out of (a) loss of or damage to property, and (b) injury to or death of persons, excepting any loss, damage, or expense and claims for loss, damage, or expense resulting in any manner from the negligent act or acts of the Grantor, its contractors, officers, agents, or employees.

7. This easement may result in a taxable possessory interest and be subject to the payment of property taxes. Grantee agrees to and shall pay before delinquency all taxes and assessments of any kind assessed or levied upon Grantee for franchises, licenses or permits for any use or activities of Grantee upon the above described easement.

8. In the event said easement is no longer required or if said easement is not used for the purposes intended for a period of one year, whichever is sooner, all rights herein granted shall revert to Grantor, its successors or assigns, automatically and without the necessity of reentry or notice. Grantee shall furnish Grantor on demand a good and sufficient Quitclaim Deed of all its rights, title and interest in the above described real property.

9. The terms, covenants and conditions of this easement shall be binding upon and inure to the benefit of all heirs, executors,

administrators, permittees, licensees, agents, assigns or successors of any kind of both Grantor and Grantee.

10. Effective January 1, 1985, Grantee hereby exchanges, releases, surrenders and quitclaims any and all interests in portions of that certain easement reserved by the Grantee, in the Conveyance from the City of San Diego to the San Diego Unified Port District, which Conveyance was filed on February 15, 1963, in the San Diego Unified Port District Clerk's Office bearing Document No. 75 and which was also recorded on February 15, 1963, File/Page No. 28389 in the Office of the San Diego County Recorder. The real property covered by said easement being exchanged to the Grantor and quitclaimed by the Grantee is delineated on City of San Diego Drawing No. 15878-1-B, dated March 8, 1984, and Drawing No. 15878-2-B dated March 8, 1984, attached hereto and by this reference made a part hereof and more particularly described as follows:

Portions of a drainage easement in the City of San Diego, County of San Diego, State of California being 15 feet in width, recorded as File/Page No. 28389, Official Records, on February 15, 1963 in the Office of the County Recorder and as shown on Engineering Drawing No. 9920-3-B entitled "Drainage Easement Southwesterly of Sampson Street Below the Mean High Tide Line" Sheet 3 of 19 filed in the Office of the City Clerk, City of San Diego, as Document No. 724665, on June 28, 1968; more particularly described in two parts as follows:

The north-south portion of said easement, lying 5 feet easterly and 10 feet westerly from the following described line:

BEGINNING at a point on the United States Bulkhead Line as it is shown on the map entitled "Harbor Lines, San Diego Bay, California, File No. (D.O. Series) 426," approved by the Secretary of the Army, April 29, 1963 which bears north 56° 20' 08" west along said United States Bulkhead Line, 419.10 feet from station number 468 of said Unitied States Bulkhead Line; thence north 7° 13' 35" east 503.87 feet to Point "A"; thence continuing north 7° 13' 35" east 31.05 feet to the POINT OF TERMINATION of the north-south portion of the herein described quitclaim.

The east-west portion of said easement, lying 7.5 feet on each side of the following described line:

BEGINNING at said point "A" thence south 55° 51' 40" east 197.99 feet to the POINT OF TERMINATION of the east-west portion of the herein described easement quitclaim.

11. SIGNATURE OF PARTIES: It is an express condition of this Easement that said Easement shall not be complete nor effective until signed by all parties.

DATED: April 24, 1985

APPROVED:

As to Form and Legality.

JOSEPH D. PATELLO

SAN DIEGO UNIFIED PORT DISTRICT

Assistant Port Director

As to Engineering and Legal Description.

JOHN E. B. WILBUR
Chief Engineer

THE CITY OF SAN DIEGO

By

Title: ASSISTANT TO THE CITY MANAGER

IN WITNESS WHEREOF, The City of San Diego has caused this deed to be executed by its Mayor and City Clerk pursuant to resolution of the Council authorizing such execution this 11th day of March, 1985.

THE CITY OF SAN DIEGO

BY

Mayor of said City
Roger Hedgecock

ATTEST:

City Clerk of said City
Charles G. Abdelnour

R- 262683

STATE OF CALIFORNIA)
) ss.
COUNTY OF SAN DIEGO)

On this 29th day of March 1985, before me, the undersigned, a Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared ROGER HEDGECOCK, known to me to be the Mayor, and CHARLES G. ABDELNOUR, known to me to be the City Clerk of The City of San Diego, the municipal corporation that executed the within instrument, and known to me to be the persons who executed the within instrument on behalf of the municipal corporation therein named, and acknowledged to me that such municipal corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal in the County of San Diego, State of California, the day and year in this certificate first above written.

OFFICIAL SEAL
ELLEN BOVARD
NOTARY PUBLIC - CALIFORNIA
PRINCIPAL OFFICE IN
SAN DIEGO COUNTY
My Commission Expires March 29, 1985

Ellen Bovard

Notary Public in and for the County of San Diego, State of California

STATE OF CALIFORNIA,)
) SS.
COUNTY OF SAN DIEGO.)

On 29th of March, 1985, before me, the undersigned, a Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared ANNE RAST, known to me to be the Assistant to the City Manager of The City of San Diego, the municipal corporation that executed the within instrument, and known to me to be the person who executed the within instrument on behalf of the municipal corporation therein named, and acknowledged to me that such municipal corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal, in the County of San Diego, State of California, the day and year in this certificate first above written.

Ellen Bovard

(Insert Notary Stamp below)

Notary Public in and for said San Diego County, State of California.

OFFICIAL SEAL
ELLEN BOVARD
NOTARY PUBLIC CALIFORNIA
PRINCIPAL OFFICE IN
SAN DIEGO COUNTY
My Commission Expires March 29, 1985

(7-20-76 LM:pvr)

STATE OF CALIFORNIA)
) ss.
COUNTY OF SAN DIEGO)

On this _____ day of _____, 198__, before me, the undersigned, a Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared _____, known to me to be the Mayor, and _____, known to me to be the Clerk of the City of San Diego, the municipal corporation that executed the within instrument, and known to me to the be persons who executed the within instrument on behalf of the municipal corporation therein named, and acknowledged to me that such municipal corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal in the County of San Diego, State of California, the day and year in this certificate first above written.

_____
Notary Public in and for the County of San Diego, State of California

STATE OF CALIFORNIA)
ss.
COUNTY OF SAN DIEGO)

On this 25th day of April, 1985, before me, Loretta Cory, the undersigned Notary Public, personally appeared Gabriel J. Gallina

✓ personally known to me
_____ proved to me on the basis of satisfactory evidence

to be the person who executed this instrument as Asst. Port Director of the San Diego Unified Port District, a public corporation, and acknowledged to me that the public corporation executed it.

WITNESS my hand and official seal.

Loretta Cory

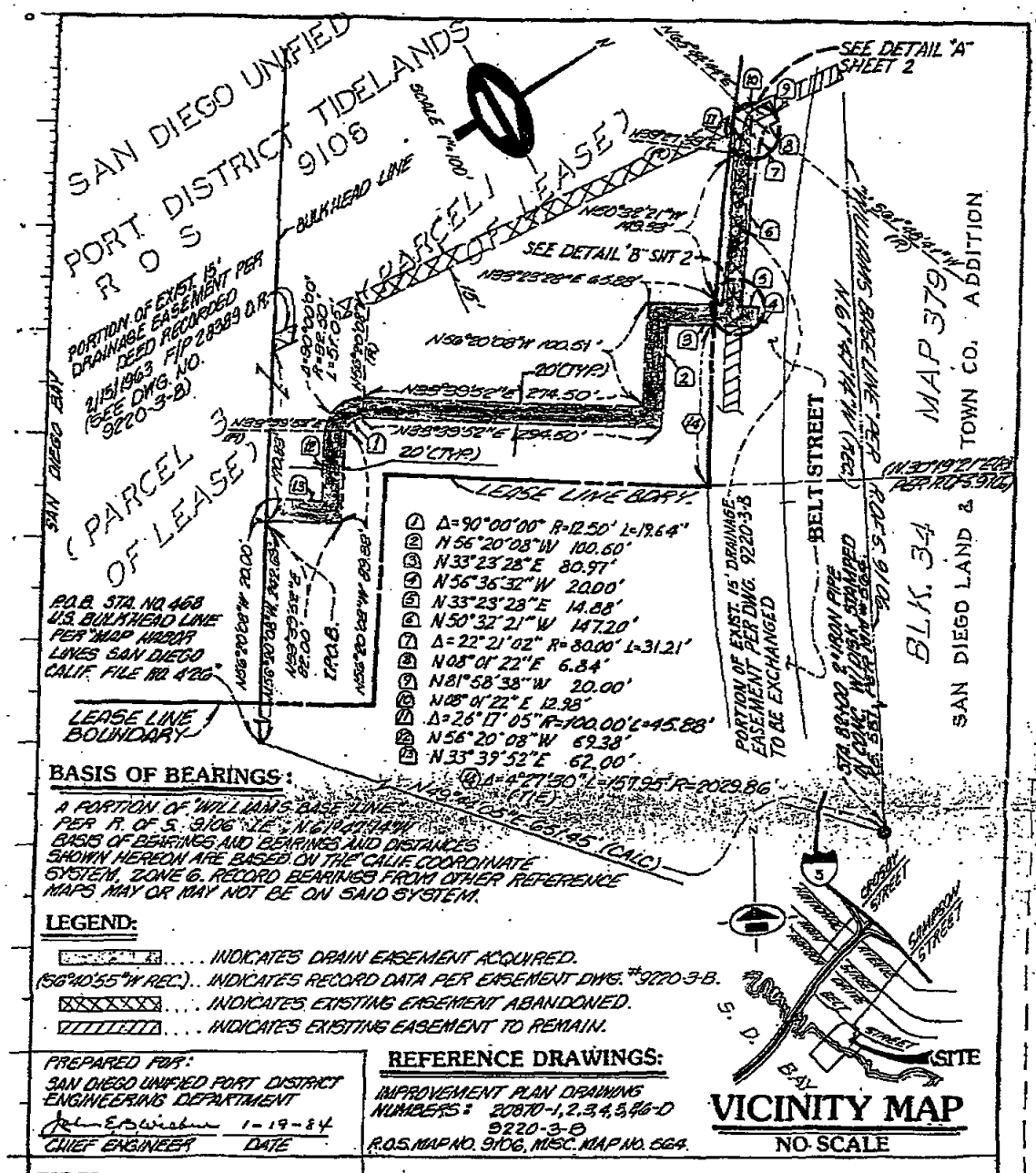
OFFICIAL SEAL
LORETTA CORY
NOTARY PUBLIC - CALIFORNIA
SAN DIEGO COUNTY
My comm. expires AUG 18, 1988

DRAINAGE EASEMENT LEGAL DESCRIPTION

In the City of San Diego, County of San Diego, State of California, a strip of land having a uniform width of 20.00 feet over a portion of Parcel 1-A as shown on Miscellaneous Map No. 564 per series 4 Book 1963, File/Page 28389 of Official Records of the County of San Diego, more particularly described as follows:

Commencing at Station No. 468 on the United States Bulkhead Line as it is shown on the map entitled "Harbor Lines, San Diego Bay, California, File No. (D.O. Series) 426", approved by the Secretary of the Army, April 29, 1963, from which point Station No. 82+00 on the "Williams Base Line" bears north 49° 44' 05" east 651.45 feet; thence from said point of beginning north 56° 20' 08" west along said U.S. Bulkhead Line a distance of 242.69 feet to the TRUE POINT OF BEGINNING, from which point the intersection of said U.S. Bulkhead Line with the easterly line of a drainage easement 15 feet in width as shown on Engineering Drawing No. 9220-3-B, Sheet 3 of 19, filed in the Office of the City Clerk as Document No. 724665 on June 28, 1968 and filed in the Office of the San Diego Unified Port District Clerk as Document No. 3383 on June 28, 1968, bears north 56° 20' 08" west 170.83 feet; thence from said TRUE POINT OF BEGINNING north 33° 39' 52" east 82.00 feet; thence north 56°20'08" west 89.38 feet to the beginning of a tangent curve concave easterly; thence northerly along the arc of said curve having a radius of 12.50 feet and a central angle of 90°00' 00" a distance of 19.63 feet; thence north 33° 39' 52" east 294.50 feet; thence north 56° 20' 08" west 100.60 feet; thence north 33° 23' 28" east 80.97 feet to a point from which the intersection of the easterly line of the herein described easement with the northerly line of a drainage easement 15 feet in width located in Belt Street, as shown on said Engineering Drawing No. 9220-3-B, bears south 33° 23' 28" west 12.93 feet; thence north 56° 36' 32" west 20.00 feet; thence south 33° 23' 28" west 14.88 feet; thence north 50° 32' 21" west 147.20 feet to the beginning of a tangent curve concave northeasterly; thence northwesterly along the arc of said curve having a radius of 80.00 feet and a central angle of 22° 21' 02", a distance of 31.21 feet to a point on a non-tangent line, through which point a radial line bears south 61° 48' 41" west; thence north 08° 01' 22" east 6.84 feet to a point from which the intersection of the northerly line of the herein described easement with the easterly line of a drainage easement 15 feet in width crossing Belt Street, as shown on said Engineering Drawing No. 9220-3-B, bears north 81° 58' 38" west 9.10 feet; thence north 81° 58' 38" west 20.00 feet; thence south 08° 01' 22" west 12.98 feet to the beginning of a non-tangent curve, concave northeasterly through which point a radial line bears south 65° 44' 44" west; thence southeasterly along the arc of said curve having a radius of 100.00 feet and a central angle of 26° 17' 05", a distance of 45.88 feet; thence south 50° 32' 21" east 149.33 feet; thence south 33° 23' 28" west 65.88 feet; thence south 56° 20' 08" east 100.51 feet; thence south 33° 39' 52" west 274.50 feet to the beginning of a tangent curve concave easterly; thence southeasterly along the arc of said curve having a radius of 32.50 feet and a central angle of 90° 00' 00" a distance of 51.05 feet; thence south 56° 20' 08" east 69.38 feet; thence south 33° 39' 52" west 62.00 feet to a point on said U.S. Bulkhead Line; thence along said U.S. Bulkhead Line south 56° 20' 08" east 20.00 feet to the TRUE POINT OF BEGINNING of the herein described easement.

EXHIBIT "A"



Δ=90°00'00" R=12.50' L=19.64'
N 56°20'08"W 100.60'
N 33°23'28"E 80.97'
N 56°36'32"W 20.00'
N 33°23'28"E 14.88'
N 50°32'21"W 147.20'
Δ=22°21'02" R=80.00' L=31.21'
N 08°01'22"E 6.84'
N 81°58'38"W 20.00'
N 08°01'22"E 12.98'
Δ=26°11'05" R=100.00' L=45.88'
N 56°20'08"W 69.38'
N 33°39'52"E 62.00'
Δ=4°27'30" L=157.95' R=2029.86'

BASIS OF BEARINGS:

A PORTION OF "WILLIAMS BASE LINE" PER R. OF S. 910 6 I.E. N 61°41'44" W BASIS OF BEARINGS AND BEARINGS AND DISTANCES SHOWN HEREON ARE BASED ON THE CALIF. COORDINATE SYSTEM, ZONE 6. RECORD BEARINGS FROM OTHER REFERENCE MAPS MAY OR MAY NOT BE ON SAID SYSTEM.

LEGEND:

..... INDICATES DRAIN EASEMENT ACQUIRED.
(S6°40'55"W REC.).. INDICATES RECORD DATA PER EASEMENT DWG. #9220-3-B.
..... INDICATES EXISTING EASEMENT ABANDONED.
..... INDICATES EXISTING EASEMENT TO REMAIN.

PREPARED FOR:
SAN DIEGO UNIFIED PORT DISTRICT
ENGINEERING DEPARTMENT
CHIEF ENGINEER — DATE 1-19-84

REFERENCE DRAWINGS:

IMPROVEMENT PLAN DRAWING NUMBERS: 20870-1, 2, 3, 4, 5, 46-D
9220-3-B
R.O.S. MAP NO. 910 6, MISC. MAP NO. 564.

BIGGS ENGINEERING CORPORATION
CIVIL ENGINEERS · PLANNING CONSULTANTS
SURVEYORS
2727 HOOVER AVENUE, NATIONAL CITY, CA. 92050
phone: (619) 474-4659
DAN S. BIGGS R.C.E. 10112 — DATE 8/11/83

DRAIN EASEMENT EXCHANGE

POR. OF PARCEL 14 OF MISCELLANEOUS MAP NO. 564 PER SERIES 4 BOOK 1963, FILE/PAGE 28389 OF OFFICIAL RECORDS OF COUNTY OF SAN DIEGO, CALIFORNIA.

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL				

STATUS

CITY OF SAN DIEGO, CALIFORNIA
SHEET 1 OF 2 SHEETS

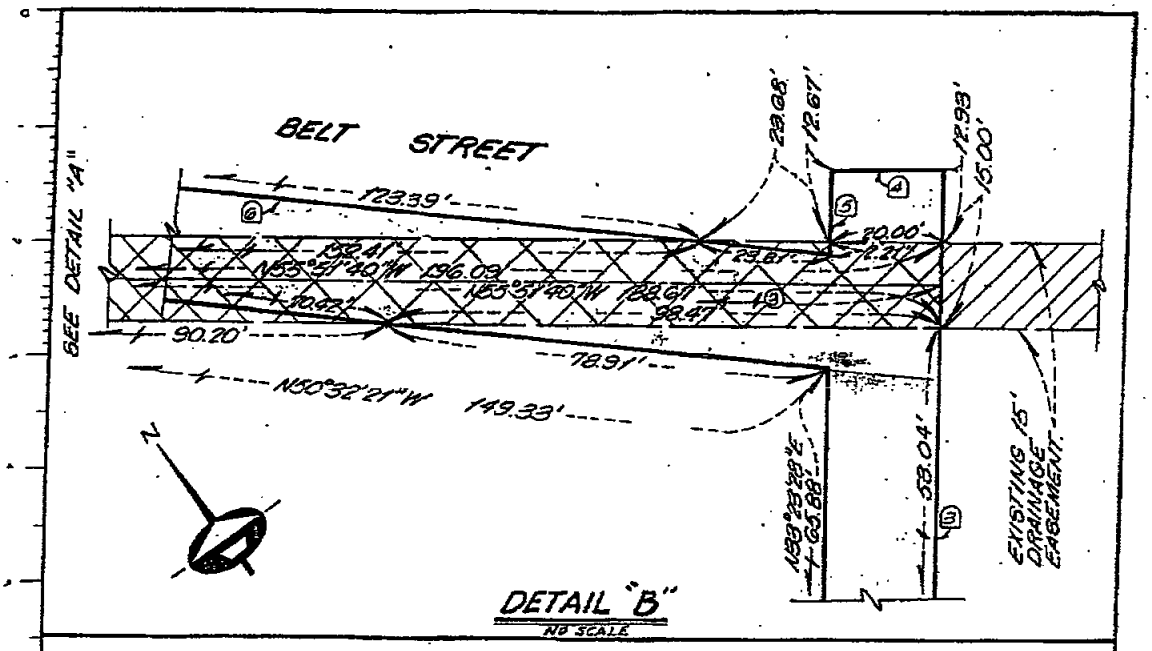
FOR CITY ENGINEER — DATE

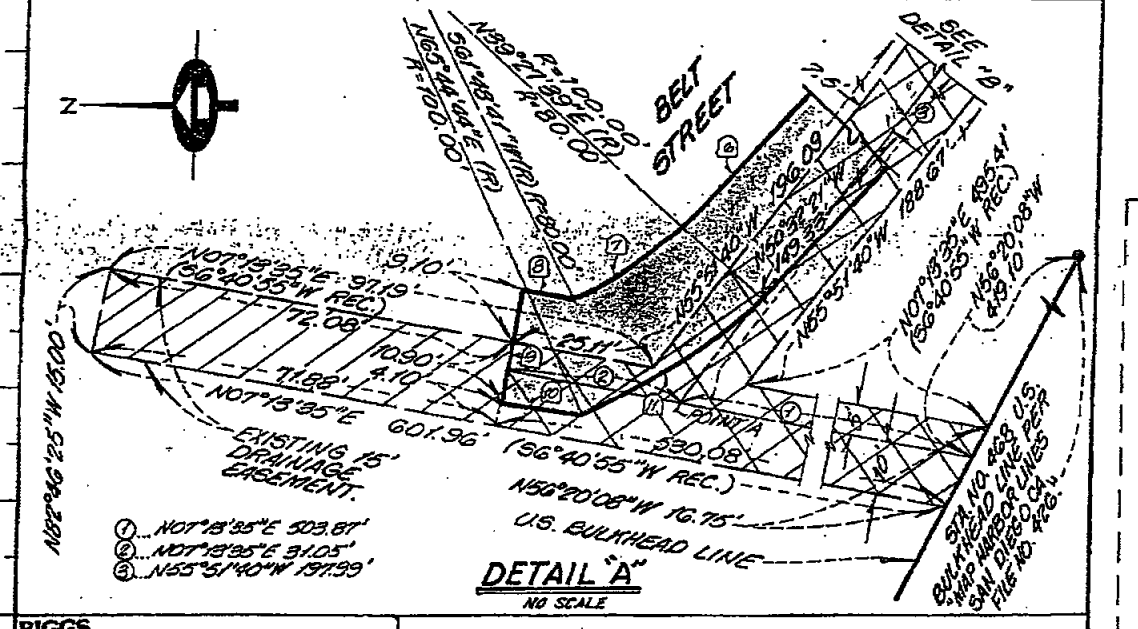
W.O. NO. 700204

CONTROL CERTIFICATION

192-1725
LAMBERT COORDINATES

15878-1-B





BIGGS ENGINEERING CORPORATION
CIVIL ENGINEERS PLANNING CONSULTANTS
SURVEYORS
2727 HOOVER AVENUE, NATIONAL CITY, CA. 92050
phone: (619) 474-4639
DAN S. BIGGS/R.C.E. 26112 — 5/11/83 DATE

DRAIN EASEMENT EXCHANGE

PORT OF PARCEL 1-A ON MISCELLANEOUS MAP NO. 564 PER SERIES 4 BOOK 1963, FILE/PAGE 209389 OF OFFICIAL RECORDS OF COUNTY OF SAN DIEGO, CALIFORNIA.

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL				

STATUS

CITY OF SAN DIEGO, CALIFORNIA
SHEET 2 OF 2 SHEETS

C. E. Lutz — 3-4-84
FOR CITY ENGINEER — DATE

W.O. NO 700204

CONTROL CERTIFICATION

192-1725
LAMBERT COORDINATES

15878-2-B

SAN DIEGO UNIFIED PORT DISTRICT

ORDINANCE 1113

AN ORDINANCE GRANTING
AN EASEMENT TO CITY OF SAN DIEGO
AND ACCEPTING QUITCLAIM DEED

The Board of Port Commissioners of the San Diego Unfied Port District does ordain as follows:

Section 1. The easement for drainage between the San Diego Unified Port District, a public corporation, and the City of San Diego, a municipal corporation, for the purpose of construction, operation, maintenance, repair, replacement and inspection of a storm drain placed below the level of the surface of the ground and necessary above-ground fixtures and appurtenances, together with the Quitclaim Deed from the City of San Diego to the San Diego Unified Port District, for real property located at Belt Street near the foot of Sampson in the City of San Diego, on file in the office of the District Clerk as Document No. 18104, is hereby approved and granted.

Section 2. The Port Director or his authorized representative is hereby directed to execute the said easement with the City of San Diego and to accept said Quitclaim Deed on behalf of the District.

Section 3. This ordinance shall take effect on the 31st day from its publication.

Presented By: DON L. NAY, Port Director

By _____
ASSISTANT PORT DIRECTOR

Approved: JOSEPH D. PATELLO, Port Attorney

_____

San Diego Unified Port District

Office of the Clerk

CERTIFICATION OF VOTE

Passed and adopted by the Board of Port Commissioners of the San Diego Unified Port District on April 23, 1985, by the following vote:

Commissioners	Yeas	Nays	Excused	Absent	Abstained
Ben Cohen	X				
Phil Creaser	X				
W. Daniel Larsen	X				
Delton C. Reopelle	X				
William B. Rick	X				
Danial N. Spurck	X				
Louis M. Wolfsheimer	X				

AUTHENTICATED BY:

William Gail
Chairman of the Board of Port Commissioners

CHRISTINE M. STEIN
Clerk of the San Diego Unified Port District

By: Mary Sue Karsman
Deputy Clerk

(Seal)

Resolution Number: _____
or
Ordinance Number: 1113

Adopted: 4-23-85

(R-85-1485)

RESOLUTION NUMBER R- 262683

ADOPTED ON MAR 11 1985

WHEREAS, SAN DIEGO UNIFIED PORT DISTRICT, a public corporation, has requested an exchange of drain easements; and

WHEREAS, the City Manager has certified that the values of the property rights to be exchanged are equal; and

WHEREAS, the easement to be acquired will serve the same use and purpose as the easement to be quitclaimed by the City; NOW, THEREFORE,

BE IT RESOLVED, by the Council of the City of San Diego, as follows:

1. That the acceptance by the City Manager of that deed of SAN DIEGO UNIFIED PORT DISTRICT, a public corporation, executed in favor of The City of San Diego, conveying to said City a drain easement in a portion of Parcel 1-A of Miscellaneous Map 564, as more particularly described in said deed, a copy of which is on file in the office of the City Clerk as Document No. RR- 262683, is hereby approved.

2. That the Mayor and City Clerk of said City be, and they are hereby authorized and empowered to execute, for and on behalf of The City of San Diego, a quitclaim deed, a copy of which is on file in the office of the City Clerk as Document No. RR- 262683 quitclaiming to SAN DIEGO UNIFIED PORT DISTRICT, a public corporation, all of the City's right, title and interest in the drain easement in a portion of Parcel 1-A of Miscellaneous Map 564, as more particularly described in said deed.

3. That the City Clerk is hereby authorized and directed to deliver both deeds, and a certified copy of this resolution, attested by him under seal, to the Property Department for further handling.

APPROVED: John W. Witt, City Attorney

By _____
Harold O. Valderhaug
Deputy City Attorney

HOV:ps
02/13/85
Job:517426-C
15878-1 & 2-B
Or.Dept:Prop.
R-85-1485
Form=r.ex

Passed and adopted by the Council of The City of San Diego on MAR 11 1985, by the following vote:

YEAS: Mitchell, Cleator, McColl, Jones, Struiksma, Gotch, Murphy, Martinez, and Mayor Hedgecock.

NAYS: None.

NOT PRESENT: None.

AUTHENTICATED BY:

ROGER HEDGECOCK
Mayor of The City of San Diego, California.

CHARLES G. ABDELNOUR
City Clerk of The City of San Diego, California.

(SEAL)

By MAYDELL L. PONTECORVO, Deputy.

I HEREBY CERTIFY that the above and foregoing is a full, true and correct copy of RESOLUTION NO. R- 262683 passed and adopted by the Council of The City of San Diego, California, on MAR 11 1985.

CHARLES G. ABDELNOUR
City Clerk of The City of San Diego, California.

(SEAL)

By Maydell L. Pontecorvo, Deputy.

(Rev. 8/79)
lbc

EXHIBIT NO. "19"

Conveyance between the City of San Diego and the San Diego Unified Port District, dated February 15, 1963

PORT OF SAN DIEGO
P.O. Box 488
San Diego 12, Calif.

(C6)
ORIGINAL

SAN DIEGO UNIFIED PORT DISTRICT
DOCUMENT NO. 75
FILED FEB 15 1963
MICROFILM NO. 8
OFFICE OF THE CLERK

CONVEYANCE

THE CITY OF SAN DIEGO, a municipal corporation, in the County of San Diego, State of California, hereby conveys, without warranty, to the SAN DIEGO UNIFIED PORT DISTRICT, a Public Corporation established pursuant to the provisions of the San Diego Unified Port District Act, all those lands situate within the City of San Diego, County of San Diego, State of California, which are more particularly described as follows:

PARCEL I:

All those lands lying between the line of mean high tide of San Diego Bay and the pierhead line of said bay, and between the prolongation into said bay to the pierhead line of the northerly line of the United States military reservation on Point Loma and the prolongation into said bay to the pierhead line of the southwesterly line of the United States Naval Training Center and reserving therefrom such roadways and easements as hereinafter described, such boundaries, roadways and easements being shown in detail upon engineering drawings Nos. 1, 2, 2a, 2b, 2c, 3, 3a, 3b, 3c, 3d, 3e, 3f, 3g, 4, 4a, 4b, 14a, 14b, 14c, & 15a, 15b, 15c, 16a, 16b, 16c.

PARCEL II:

All those lands lying between the line of mean high tide of San Diego Bay and the pierhead line of said bay, and between an irregular westerly boundary being an irregular line beginning at Government Station 488 on the combined pierhead and bulkhead line and proceeding northerly; thence easterly; thence northerly; thence easterly; thence northeasterly along the boundary of the United States Marine Corps Base to the point where such boundary intersects the mean high tide line in the vicinity of Washington Street and Pacific Highway, and the northwesterly boundary lines of the United States Naval Station between the mean high tide line and the United States Pierhead Line being an irregular line, omitting therefrom the United States Coast Guard Base lying southerly of North Harbor Drive and in the vicinity of Lindbergh Field; and the Civic Center lying between North Harbor Drive and Pacific Highway and between Grape and Ash Streets; and the United States Naval Supply Center consisting of four parcels, (1) the block lying between Broadway and "E" Street and between North Harbor Drive and Pacific Highway, (2) the block lying between "B" and "F" Streets and between North Harbor Drive and Pacific Highway, (3) a portion of a block between "F" and Market Streets and North Harbor Drive and Pacific

Highway, (4) The United States Naval Pier at the foot of "E" Street; and adding portions of fractional blocks 18 and 19, New San Diego, according to the Map thereof No. 456, lying above the mean high tide line; such boundaries, roadways, easements and omissions being shown in detail upon engineering drawings Nos. 4, 5, 6, 6a, 6b, 6c, 7, 8, 8a, 8b, 9, 9a, 9b, 9c, 9d, 9e, 10, 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, 11, 12, 12a, 13, 13a, 13b, 13c, 14c, 14d, 14e, 14f, 15c, 15d, 15e, 15f, 16e, 16f, 14g, 15g, 16c, 16d, 16g.

The City retains from the conveyance of Parcel II the right of control and possession of that block surrounded by Pacific Highway on the west, Kettner Boulevard on the east, Market Street on the north, and Harbor Drive on the south, for a Police Station and for so long as the City continues to use it for that purpose.

PARCELS III through XIV:

The following described uplands lying above the line of mean high tide of San Diego Bay:

(Parcel III):

Lot 8, Block 135, La Playa, Couts Miscellaneous Map No. 37, lying above mean high tide line, and as shown on engineering drawing No. 2a.

(Parcel IV):

Portion Closed Street, Adjacent Lot 2, Block 154, La Playa, Couts Miscellaneous Map No. 37, lying above mean high tide line, and as shown on engineering drawing No. 2b.

(Parcel V):

Portions of Right of Way Lots 73 and 74 of Middletown, according to Jackson's Map of Middletown, and as shown on engineering drawing No. 8a.

(Parcel VI):

Portion of Lot 6, Block 272 of Middletown, according to Jackson's Map of Middletown, and as shown on engineering drawing No. 8b.

(Parcel VII):

Lot E, Block 22, New SanDiego, according to the Map thereof No. 456, lying above the mean high tide line.

(Parcel VIII):

Lot E, Block 23, New San Diego, according to the Map thereof No. 456, filed in the office of the County Recorder, said County of San Diego, excepting therefrom that portion, if any, lying below the mean high tide line of the Bay of San Diego, and excepting therefrom the Right of Way of the Atchison, Topeka and Santa Fe Railway Company.

(Parcel IX):

Portion of Lot F, Block 23, New San Diego, lying above the mean high tide line, and as shown on engineering drawing No. 10e.

(Parcel X):

All of Block 31, New San Diego, Map No. 456.

(Parcel XI):

Portion of Pueblo Lot 1164 northwesterly of Sampson Street, as shown on engineering drawing No. 12a.

(Parcel XII):

All of Block 45, Roseville, Map No. 165, lying above the mean high tide line.

(Parcel XIII):

Lot 6, Block 62 of Roseville, according to Map No. 165 of Roseville, lying above the mean high tide line, as shown on engineering drawing No. 13a.

(Parcel XIV):

The portions of Fractional Block 54 and the Unnumbered Fractional Block in San Diego Land and Town Company's Addition, according to record map thereof No. 379, lying between the mean high tide line of the Bay of San Diego, and the southerly right of way line of the Atchison, Topeka and Santa Fe Railroad, as shown on engineering drawing No. 13c.

ROADWAYS RESERVED

The City of San Diego specifically reserves easements for street purposes, as more particularly set forth hereinafter, including within such reservations the right to construct, maintain and operate all utilities and the right to grant franchises on such streets and to require franchise payments to The City of San Diego as authorized by the Charter of The City of San Diego:

PARCEL A: (Roads within Parcel I described above)

For San Antonio Avenue - an easement over that portion included between the mean high tide line and the prolongation of the easterly line of San Antonio Avenue as it now exists, as shown on engineering drawing No. 2.

For Talbot Street - an easement 70' in width extending from the mean high tide line to the southeasterly line of Anchorage Lane, as shown on engineering drawing No. 3f.

For Canyon Street - an easement 70' in width extending from the mean high tide line to the southeasterly line of the most southeasterly line of Anchorage Lane, as shown on engineering drawing No. 3a.

For Anchorage Lane - an easement 48' in width between the northeasterly line of Talbot Street and the southwesterly line of Canyon Street, and an easement 55' in width between the northeasterly line of Canyon Street and the southwesterly line of Byron Street, as shown on engineering drawings Nos. 3e and 3f.

For Byron Street - an easement 60' in width between the mean high tide line and the traffic circle at Byron Street and Yacht Harbor Drive, as shown on engineering drawings Nos. 3c, 3d.

For Yacht Harbor Drive - an easement of variable widths as shown on engineering drawings Nos. 2c, 2d, 2e, 4b.

For the traffic circle at Byron Street and Yacht Harbor Drive - easements of variable widths as shown on engineering drawing No. 2a.

For the traffic circle at the southwesterly end of Yacht Harbor Drive - easements of variable widths as shown on engineering drawing No. 2c.

For Garrison Street - an easement 70' in width extending from the mean high tide line to the northwesterly line of Scott Street, as shown on engineering drawing No. 3g.

For Scott Street - an easement 70' in width extending from the point where the mean high tide line intersects the southeasterly line of Scott Street to the southwesterly boundary of North Harbor Drive, the variable widths of such easement as shown on engineering drawing No. 3g.

For North Harbor Drive - an easement 162.5' in width extending easterly from the mean high tide line to the southwesterly line of the United States Naval Training Center, as shown on engineering drawing No. 4a.

For Lowell Street - an easement 73.5' in width extending southeasterly from the mean high tide line to the northerly line of North Harbor Drive, as shown on engineering drawing No. 4a.

PARCEL B: (Roads within Parcel II described above)

For 28th Street - an easement 126' in width extending from the mean high tide line to the northerly line of Harbor Drive, as shown on engineering drawing No. 13d.

For 8th Avenue - an easement 80' in width extending from the mean high tide line to the northeasterly line of Harbor Drive, as shown on engineering drawing No. 11.

For 5th Avenue - an easement 80' in width extending from the mean high tide line to the northeasterly line of Harbor Drive, as shown on engineering drawing No. 11.

For Kettner Boulevard - an easement 75' in width extending southerly from the mean high tide line to the northeasterly line of Harbor Drive, as shown on engineering drawing No. 10.

Broadway - an easement 125' in width extending from the westerly line of Pacific Highway to a line parallel to and 200' easterly from the United States bulkhead lines, as shown on engineering drawing No. 10g.

For Ash Street - an easement 80' in width extending from the westerly line of Pacific Highway to the easterly line of North Harbor Drive, as shown on engineering drawing No. 9a.

For Grape Street - an easement 80' in width extending from the westerly line of Pacific Highway to the easterly line of North Harbor Drive, as shown on engineering drawing No. 9b.

For Hawthorn Street - an easement 80' in width extending from the mean high tide line to the easterly line of Pacific Highway; an easement 80' in width extending from the northwesterly line of Pacific Highway to the northeasterly line of North Harbor Drive, as shown on engineering drawing No. 9.

For Ivy Street - an easement 80' in width extending from the mean high tide line to the easterly line of Pacific Highway, as shown on engineering drawing No. 9.

For Laurel Street - an easement 80' in width extending from the mean high tide line to the northeasterly line of Pacific Highway; an easement 80' in width extending from the southwesterly line of Pacific Highway to the northerly line of North Harbor Drive with a variable width at the Harbor Drive end of said easement, as shown on engineering drawings Nos. 9b, 9c.

For Palm Street - an easement 80' in width extending from the mean high tide line to the northeasterly line of Pacific Highway, as shown on engineering drawing No. 8.

For Sassafras Street - an easement 80' in width extending from the mean high tide line to the northeasterly line of Pacific Highway, as shown on engineering drawing No. 8.

For Vine Street - an easement 80' in width extending from the mean high tide line to the northeasterly line of Pacific Highway, as shown on engineering drawing No. 8.

For North Harbor Drive - an easement 200' in width extending from the westerly boundary line of Parcel II to the easterly line of the United States Coast Guard Base; an easement 179' in width extending from the easterly line of the United States Coast Guard Base to the vicinity of the prolongation of Date Street; an easement 165' in width extending from the vicinity of the prolongation of Date Street to the southerly line of Ash Street, as shown on engineering drawings Nos. 4, 5, 6, 7, 9.

For Harbor Drive - an easement of variable widths extending from the easterly line of Pacific Highway to where said street intersects the mean high tide line in

the vicinity of the prolongation of 16th Street; an easement providing for a right of way 120' in width from the vicinity of Schley Street to the vicinity of the United States Naval Repair Base; the variable widths of such easements as shown on engineering drawings Nos. 10, 11, 13.

For Pacific Highway - an easement providing for a right of way of variable widths between that point where the mean high tide line intersects the southwesterly line of Pacific Highway in the vicinity of Washington Street and the southerly line of Harbor Drive, as shown on engineering drawings Nos. 8, 9, 10.

For all the above-mentioned streets - an easement of such width for intersection purposes at the intersection of any of the aforementioned streets with each other or with any other roadway and as shown on the appropriate engineering drawings in Exhibit "A."

OTHER EASEMENTS RESERVED

City reserves easements in Parcels I through XIV for all existing water, sewer and drainage facilities, known or unknown, the location of known existing utilities being designated by engineering drawings Nos. 14a - 14g; 15a - 15g; 16a - 16g; unknown easements shall be more specifically located by survey and location maps of such easements shall be prepared, which maps shall become a part of this conveyance as a subsequent exhibit when approved by District and City.

QUITCLAIM

Parcel XV:

City quitclaims all its right, title and interest in all those submerged lands in the Bay of San Diego bayward of the pierhead line within the city limits of said city, excepting those lying easterly of the jetty and southerly of the peninsular of San Diego; and southerly of the common boundary of the City of San Diego and the City of National City as shown on engineering drawing No. 1.

EXHIBITS

All engineering drawing numbers referred to in this document under Parcels I through XIV; Roadways Parcels A and B; and Easements, by reference thereto are incorporated herein and attached hereto as Exhibit "A".

filed in [illegible]
file in [illegible]
marked [illegible]
maps

IN WITNESS WHEREOF, The City of San Diego has caused this conveyance to be executed by its Mayor and City Clerk, pursuant to resolution of the Council authorizing such execution, this 14th day of February, 1963.

THE CITY OF SAN DIEGO

By _____
Mayor of said City

ATTEST:

_____
City Clerk of said City

STATE OF CALIFORNIA)
) ss.
COUNTY OF SAN DIEGO)

990

On this 14th day of February, 19 63, before me, the undersigned, a Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared CHARLES C. DAIL, known to me to be the Mayor, and PHILLIP ACKER, known to me to be the City Clerk of The City of San Diego, the municipal corporation that executed the within instrument, and known to me to be the persons who executed the within instrument on behalf of the municipal corporation therein named, and acknowledged to me that such municipal corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal, in the County of San Diego, State of California, the day and year in this certificate first above written.

(SEAL)
My Commission Expires
Sept. 11, 1966

Helen M. Willig
Notary Public in and for the County of San Diego, State of California
HELEN M. WILLIG

FILE/PAGE NO. 28389
RECORDED REQUEST OF

FEB 15 11 42 AM '63

SERIES 4 BOOK 1963
OFFICIAL RECORDS
SAN DIEGO COUNTY, CALIF.
A. S. GRAY, RECORDER
NO FEE

174499 FEB 14 1963

75

Sec. 41-C

THE CITY OF SAN DIEGO

SAN DIEGO, CALIFORNIA

OFFICE OF
CITY CLERK

ROOM 356
CIVIC CENTER

February 15, 1963

REFERENCE COPY

75

Don Nay
Attorney's Office
San Diego Unified Port District
San Diego, California

Dear Mr. Nay:

The Duplicate Originals of three agreements authorized by the City Council on February 14, 1963, covering the transfer of lands and assets, personnel, retirement, etc., are attached. The originals of these agreements are filed in our office under one Document Number which is No. 651832.

We are also enclosing the original copy of the CONVEYANCE of the lands from the City to the Port District and a certified copy of the Resolution authorizing the agreements and conveyance which is Resolution No. 174499.

Yours truly,

PHILLIP ACKER, City Clerk

By La Verne E. Miller
La Verne E. Miller
Asst. City Clerk

lm
Encl. (4)

cc: Carl Reupsch
R. J. Curran

EXHIBIT NO. "20"

Declaration of Expert Robert Collacott in Support of the San Diego Unified Port District's Submission of Comments, Evidence and Legal Argument

William D. Brown, Esq., (SBN 125468)
Wentzelee Botha, Esq., (SBN 207029)
BROWN & WINTERS, LLP
120 Birmingham Drive, Suite 110
Cardiff-by-the-Sea, CA 92007
Telephone: (760) 633-4485
Facsimile: (760) 633-4427
E-mail: bbrown@brownandwinters.com
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SAN DIEGO UNIFIED PORT DISTRICT

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

In re Tentative Cleanup and Abatement Order No. R9-2011-0001 (formerly No. R9-2010-0002) (Shipyard Sediment Site)	**DECLARATION OF EXPERT ROBERT COLLACOTT IN SUPPORT OF THE SAN DIEGO UNIFIED PORT DISTRICT'S SUBMISSION OF COMMENTS, EVIDENCE AND LEGAL ARGUMENT** Presiding Officer: Grant Destache

I, Robert Collacott, declare:

1. I am a Principal Scientist at URS Corporation in Santa Ana, California. I have over 31 years of experience covering a broad range of environmental programs related to permitting storm water and wastewater discharges. I hold a M.S. in Biology from the University of California – Irvine and a Masters in Business Administration from the California State University – Fullerton. Attached as Exhibit 1 is a copy of my CV.

2. As an expert inmunicipal separate storm sewer system ("MS4") regulation and compliance, I have analyzed and/or assisted in the development of many National Pollutant Discharge Elimination System ("NPDES") MS4 permit compliance programs and associated MS4 facilities such as the MS4 system in the area of the San Diego Unified Port District (the "Port District") jurisdiction tributary to the Shipyard Sediment Site.

3. I have extensive knowledge regarding NPDESregulatory schemes that govern the implementation and operation of MS4s.

4. To date I have reviewed California Regional Water Quality Control Board – San Diego Region Order No. R9-2007-0001 (the "MS4 Permit");Tentative Cleanup and Abatement Order No. R9-2011-0001 and Draft Technical Report; permit files for the Port District, tenants and the City of San Diego, City of Lemon Grove and City of La Mesa; the Port District's current compliance documentation, model MS4 Permit compliance programs, internet sites, policies and procedures, training programs and notices of violation.

5. I have interviewed appropriate Port District staff responsible for implementation of elements of the MS4 Permit compliance program; maintenance of historical maps, photos and engineering drawings; and management of tenant lease records. I have reviewed various Port files relating to the MS4 and the Port District's compliance

program, includingbut not limited to the Port District's Jurisdictional Urban Runoff Management Plan ("JURMP"), historical maps and aerial photos of the Port District area in the vicinity of the Shipyard Sediment Site and tenant leases. I have also physically inspected the Port's MS4 facilities in the vicinity of the Shipyard Sediment Site.

6. I reviewed the California Regional Water Quality Control Board – San Diego Region discharger databases, files, notices of violation and other published reports.

7. In my opinion, based on my analysis and pertinent to the Port District's Submission of Comments, Evidence and Legal Argument,there is no evidence thatstorm waterflowing 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.

8. My opinion is based on the following facts:

a. The City of San Diego maintains easements and owns and operates the MS4 facilities and the associated outfalls SW4 and SW9, and has since the Tidelands property was conveyed in trust to the Port on February 15, 1963.

b. Outfall SW9 is located on property that has been leased by National Steel and Shipbuilding Company ("NASSCO") since at least 1960. NASSCO does not discharge, nor has it ever discharged, storm water or non-storm water to the Port District's MS4 facilities.

c. Outfall SW4 is located on property that has been leased by BAE Systems San Diego Ship Repair, Inc., and its predecessor company, Southwest Marine, Inc.(collectively, "BAE") since 1979. Although BAE owns and operates storm drain inlets associated with office facilities that discharge to the City of San Diego MS4 facility that discharges to outfall SW4, it does not discharge, nor has it ever discharged, storm water or non-storm water to the Port District's MS4 facilities.

d. From the date the Tidelands property was conveyed in trust to the Port on February 15, 1963, through the beginning of BAE's tenancy in 1979, the property that contains SW4 was leased by San Diego Marine Construction Corporation (a wholly owned subsidiary of Campbell Industries, Inc.) formerly known as MCCSD ("Campbell") and San Diego Marine Construction Company ("SDMC Co."). Campbell and SDMC Co. did not discharge storm water or non-storm water to the Port District's MS4 facilities.

e. The portion of the Port District that is not leased to tenants and is tributary to outfall SW4 is limited to portions of Belt Street (approx. 1 acre), consisting of an estimated one-half mile (1/2 mile street) of curb and gutter, four storm drain inlets, and an estimated 770 feet of underground storm drains 24-inches in diameter and smaller. No area of the Port District drains to outfall SW9. The non-tenant area of the Port District constitutes approximately 0.01% of the area tributary to San Diego Bay in the area of the Shipyard Sediment Site.

f. The Port District does not own or operate industrial facilities in the areas tributary to SW4 and SW9.

g. The Port District inspects the storm drain inlets within its MS4 on Belt Street annually or biannually, and sweeps Belt Street monthly as required by the MS4 Permit.

h. The Port District Environmental Services Department has prepared a JURMP document in accordance with the requirements of the MS4 Permit, and in my opinion, operates its MS4 facilities in accordance with its JURMP.

9. In my opinion, based upon my evaluation and experience with other MS4 compliance programs in California, the Port District'scompliance program is being

implemented to the Maximum Extent Practicable standard prescribed by the MS4 permit. It is my opinion that the Port District views the requirements of the MS4 Permit as minimum compliance requirements, and has proactively implemented compliance activities at a higher level in several instances.

I declare under penalty of perjury of the laws of the State of California that theforegoing is true and correct and that this declaration was executed on May 24, 2011 at Villa Park, California.

Robert Collacott

EXHIBIT 1

Curriculum Vitae

ROBERT COLLACOTT

Associate

Area of Expertise	NPDES Permitting, Stormwater Management Planning, Stormwater Monitoring, Regulatory Programs, Water Quality Management, Erosion and Sediment Control, Post Fire Hazard Remediation
Years of Experience	
URS	17
Other Firms	14
Education	California State University, Fullerton, Masters of Business Administration, 1986 University of California, Irvine: M.S., Science, Biology, 1976 University of California, Irvine: B.S., Science, Biology, 1974
Registration/Certification	
Overview	Mr. Collacott has 31 years of experience covering a broad range of environmental programs related to permitting stormwater and wastewater discharges. As Manager of Water Resources Management and Permitting for the Santa Ana office, he is responsible for directing projects involving stormwater and wastewater discharge permitting, surface water quality management and planning, and regulatory compliance plan development and implementation. His experience includes stormwater discharge permitting, stormwater quality planning and monitoring, hydrologic monitoring, water resource management, solid waste management, and regulatory compliance. He founded the State Water Resources Control Board's (SWRCB) Stormwater Quality Task Force which was later incorporated as the California Stormwater Quality Association (CASQA). This organization provides consultation to and liaison among water quality regulators (EPA, SWRCB, RWQCBs) and stormwater dischargers (municipal and industrial). As Chairman of the Water Resources Committee of the Southern California Chapter of APWA, he organized and presented a number of workshops since 1988 addressing the requirements of the Clean Water Act to thousands of industrial and municipal compliance managers and consultants. His work in the above areas has provided Mr. Collacott with in-depth understanding of the challenges inherent in obtaining NPDES discharge permits for stormwater and wastewater systems, surface water quality monitoring, evaluating and permitting water resource projects, and developing and implementing practical water quality control programs.
Project Experience	**Project Manager, Municipal Storm Water NPDES Program Support, Riverside County, California.** Since 1992, has provided the Riverside County municipal stormwater permittees comprehensive municipal storm water NPDES program support. This has included assistance in preparing Reports of Waste Discharge (ROWD), negotiating renewal of the NPDES municipal stormwater permits with the Colorado River Basin, Santa Ana and San Diego Regional Water Quality Control Boards and developing compliance programs. Notably, the Santa Ana Region permit was adopted in 2002 with the support of both the Regional Board staff and the municipal permittees. He assisted the municipal stormwater permittees in the revision of the Drainage Area Management Plan that covers the Santa Ana and Santa Margarita Regions of Riverside County and in the revision of the Stormwater Management Plan for the Whitewater River Region. In this

project he is also assisting in the revision of the Consolidated Monitoring Program and providing additional regulatory support on proposed TMDLs and other water regulatory issues and studies.

Project Manager, Storm Water Management Plan Development for California Department of Transportation (Caltrans). Statewide. Between 1995 and 2001, provided direct support to the California Department of Transportation (Caltrans) Headquarters in the development of the Statewide Storm Water Management Plan (SWMP). This SWMP covers all Caltrans storm water compliance including municipal, construction, and industrial storm water discharge quality management. In addition, he has assisted Caltrans in developing SWMPs and NPDES stormwater permit applications for activities and facilities in San Diego Region and Ventura County.

Project Manager, Development Review, City of Orange, California. Assisted the City of Orange in providing a peer review of the proposed runoff management plans (ROMP) for The Irvine Company's Santiago Hills Phase 2/East Orange Planned Community project. The ROMPs also serves as a preliminary Water Quality Management Plan (WQMP) for these developments. The developments, which will create 8,000 new residences, are tributary to a regional park lake with existing impairments and a major surface water reservoir used for municipal supply.

Project Manager, Municipal Storm Water Permitting, County of Orange, California. Directed and negotiated discharge and stormwater permitting for the County of Orange for the initial (1990) and 1996 municipal stormwater permits. This included negotiating the municipal NPDES stormwater permits for Orange County and 32 cities with the Santa Ana and San Diego Regional Water Quality Control Boards and the development and implementation of compliance programs.

Project Manager, Expert Witness Support, County of Los Angeles, California. Provided expert witness support for the defense of Los Angeles County municipal stormwater permit compliance program in litigation with the Natural Resources Defense Council (NRDC). This has included participation in negotiation of a settlement agreement addressing program development and implementation and stormwater and receiving water monitoring. The settlement agreement included an outline of a comprehensive set of work manuals (the Stormwater Program Implementation Manual) addressing implementation of each compliance program. Subsequently directed the development of Stormwater Program Implementation Manual for the Los Angeles County Department of Public Works.

Project Manager, Expert Witness Support, Cities of Hermosa Beach and El Segundo, California. Assisted the Cities of Hermosa Beach and El Segundo in negotiating settlement agreements of citizen suits filed for alleged failure to comply with the NPDES Municipal Stormwater Permit with the Natural Resources Defense Council. Mr. Collacott directed the development of a key element of the settlement agreements: preparation of Stormwater Program Implementation Manuals. The Implementation Manuals provide policies and procedures, implementation responsibility matrices, checklists, reporting forms and other information to document and guide implementation of the stormwater permit compliance programs.

Project Manager, Management Review and Expert Witness Support, Confidential County Client, California. Provided expert technical support to assist a major county in California (confidential client) in response regarding a citizen suit filed by NRDC for alleged failure to comply with the requirements of their municipal stormwater permit and the California General Industrial Activities Stormwater Permit. This assignment included directing an evaluation of compliance with permit requirements, recommendations to achieve compliance, evaluation and recommendations for modifications to the organization of the County related to the municipal storm water program, and development of a proposed strategy to address the pending lawsuit.

Assistant Project Manger, Southwest Division of the Navy. Developed a format for and directed the preparation of Stormwater Pollution Prevention Plans (SWPPPs) for over 1,300 facilities on 28 bases operated by the U.S. Navy.

Project Manager, Wastewater Discharge Permitting, Southern Calfornia Edison. Assisted Southern California Edison in obtaining a waiver of discharge requirements for the Magnolia Generating Station in Redlands, California. This involved reviewing the facility design, identifying regulatory requirements, proposing significant facility modifications and coordination with the Santa Ana Regional Water Quality Control Board.

Project Manager, Wastewater Discharge Permitting, AES Southland, California. Assisted AES Southland n preparing Reports of Waste Discharge for renewal of the NPDES permits for the Huntington Beach, Alamitos and Redondo Generating Stations. This involved preparation of application, compilation of monitoring data, review of operations and development of recommendations to reduce regulatory exposure and assisting in negotiating permit requirements.

Task Manager, California Energy Commission Permitting. Assisted in preparing Application for Certification (AFC) for repowering of Units 1 and 2 of the El Segundo Generating Station. This project involved relacement of the generating units using the existing once-through cooling system to Santa Monica Bay. Lead expert in addressing water related issues, including regulatory and design issues related to the once-through cooling system. This included assisting El Segundo Power in renewing the NPDES permit during the AFC process and in resolving an extensive Notice of Violation issued by the Los Angeles Regional Water Quality Control Board. The alleged violations were either dismissed or resolved to the satisfaction of the LARWQCB and the discharger.

Project Manager, Wastewater Discharge Regulatory Assistance, California. Assisted in the renewal of the Long Beach Generating Station NPDES Permit for the discharge of wastes from the once-through cooling system to Long Beach Harbor. Also successfully assisted in resolving an extensive Notice of Violation issued by the Los Angeles Regional Water Quality Control Board. Also assisted the Long Beach Generating Station in renewing the NPDES permit and in resolving two major Notices of Violation issued by the LARWQCB. The alleged violations were either dismissed or resolved to the satisfaction of the LARWQCB and the discharger.

Task Manager, California Energy Commission Permitting. Application for Certification (AFC) for the repowering of the Magnolia Generating Station. This project involved repowering of the generating units with a proposed cooling

system utilizing tertiary effluent and cooling towers with blowdown to the Los Angeles River. Lead expert in addressing water related issues, including regulatory and design issues related to the once-through cooling system.

Project Manager, Wastewater Discharge Permitting, California. Provided regulatory and design assistance to United Foods, Inc. Mushroom Farm, Ventura California. Assisted in negotiating the renewal of Waste Discharge Requirements (WDRs) with the Los Angeles Regional Water Quality Control Board (LARWQCB) and in developing design alternatives to limit regulatory exposure, leading to development of a closed system that captures and utilizes all runoff from the 29 acre facility. Following implementation of this system, the LARWQC agreed to rescind the WDRs.

Management of numerous projects dealing with the permitting of discharges, development and implementation of compliance plans. Many of these projects involved the development of innovative solutions to difficult regulatory issues. Representative projects include:

- Development of Storm Water Pollution Prevention Plans (SWPPPs) for all Union Pacific Railroad rail yards west of Denver, Colorado.
- Negotiation of alternative permitting requirements for a major Union Pacific Railroad rail yard faced with a discharge prohibition
- Negotiation of alternative permit requirements for a major oil field facility and refinery in the Los Angeles/Long Beach Harbor area faced with restrictive and costly discharge requirements
- Assisting a facility operator in addressing a seven-page notice of violation for alleged non-compliance with the California NPDES General Industrial Stormwater Permit (Notice of Violation subsequently rescinded)
- Permitting of sanitary and stormwater discharges for nine food production facilities throughout California
- Development of a municipal NPDES stormwater permit compliance program for the County of Riverside
- Developed group stormwater permitting and monitoring program for over 200 facilities for the Building Materials Industry in compliance with the California General Industrial Activities Stormwater Permit

Professional Societies

President, Southern California Chapter, American Public Works Association, 1999
State Water Resources Control Board, Stormwater Quality Task Force, Vice-Chairman, 1989-1995
Water Resources Committee, Southern California Chapter, American Public Works Association, Chairman, 1989-1998
Orange County Water Association

Awards

Project of the Year, 1989, Upper Newport Bay Sediment Control and Restoration Facilities, American Society of Civil Engineers, Orange County Chapter
Chapter Service Award, 1993, American Public Works Association, Southern California Chapter

EXHIBIT NO. "21"

Natural Resources Defense Council, Inc. v. County of Los Angeles
(2010) 2011 U.S. App. LEXIS 4647, 41 Env. L. Rptr. 20109

LexisNexis®

NATURAL RESOURCES DEFENSE COUNCIL, INC.; SANTA MONICA BAYKEEPER, Plaintiffs-Appellants, v. COUNTY OF LOS ANGELES; LOS ANGELES COUNTY FLOOD CONTROL DISTRICT; MICHAEL ANTONOVICH, in his official capacity as Supervisor; YVONNE BURKE, in her official capacity as Supervisor; GLORIA MOLINA, in her official capacity as Supervisor; ZEV YAROSLAVSKY, in his official capacity as Supervisor; DEAN D. EFSTATHIOU, in his official capacity as Acting Director of Los Angeles County Department of Public Works; DON KNABE, in his official capacity as Supervisor, Defendants-Appellees.

No. 10-56017

UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

2011 U.S. App. LEXIS 4647; 41 ELR 20109

December 10, 2010, Argued and Submitted, Pasadena, California
March 10, 2011, Filed

PRIOR HISTORY: [*1]

Appeal from the United States District Court for the Central District of California. D.C. No. 2:08-cv-01467-AHM-PLA. Howard Matz, District Judge, Presiding.

NRDC v. County of L.A., 2010 U.S. Dist. LEXIS 25083 (C.D. Cal., Mar. 2, 2010)

DISPOSITION: AFFIRMED IN PART, REVERSED IN PART, and REMANDED.

COUNSEL: Aaron Colangelo, Esquire, Natural Resources Defense Council, Washington, D.C.; Daniel Cooper, Esquire, Lawyers for Clean Water, San Francisco, California, for plaintiffs-appellants Natural Resources Defense Council, Inc. and Santa Monica Baykeeper.

Andrea Sheridan Ordin, Esquire, Judith A. Fries, Esquire, Laurie Dods, Esquire, Los Angeles County Department of County Counsel, Los Angeles, California; Howard Gest, Esq., David W. Burhenn, Esq., Burhenn & Gest LLP, Los Angeles, California, for defendants-appellees County of Los Angeles, et al.

JUDGES: Before: Harry Pregerson, and Milan D. Smith, Jr., Circuit Judges, and H. Russel Holland, Senior District Judge. * Opinion by Judge Milan D. Smith, Jr.

* The Honorable H. Russel Holland, Senior United States District Judge for the District of Alaska, sitting by designation.

OPINION BY: Milan D. Smith, Jr.

OPINION

M. SMITH, Circuit Judge:

Plaintiffs-Appellants Natural Resources Defense Council and Santa Monica Baykeeper appeal the district court's grant of summary judgment [*2] in favor of two municipal entities that Plaintiffs allege are discharging polluted stormwater in violation of the Federal Water Pollution Control Act (the Clean Water Act, Act, or CWA), 86 Stat. 816, codified as amended at *33 U.S.C. § 1251 et seq.* Plaintiffs contend that Defendants-Appellees County of Los Angeles (County) and Los Angeles County Flood Control District (District) are discharging polluted urban stormwater runoff collected by municipal separate storm sewer systems (ms4) into navigable waters in Southern California. The levels of pollutants detected in four rivers--the Santa Clara River, the Los Angeles River, the San Gabriel River, and Malibu Creek (collectively, the Watershed Rivers) --exceed the limits allowed in a National Pollutant Discharge Elimination System (NPDES) permit which governs municipal stormwater discharges in the County. Although all parties agree that numerous water-quality standards have been exceeded in the Watershed Rivers, Defendants

contend that there is no evidence establishing their responsibility for, or discharge of, stormwater carrying pollutants to the rivers. The district court agreed with Defendants and entered a partial final judgment.

We [*3] conclude that the district court erred with respect to the evidence of discharges by the District into two of the Watershed Rivers--the Los Angeles River and San Gabriel River. Specifically, Plaintiffs provided evidence that the monitoring stations for the Los Angeles and San Gabriel Rivers are located in a section of ms4 owned and operated by the District and, after stormwater known to contain standards-exceeding pollutants passes through these monitoring stations, this polluted stormwater is discharged into the two rivers. Accordingly, Plaintiffs were entitled to summary judgment on the District's liability for discharges into the Los Angeles River and San Gabriel River, and therefore we reverse the district court's grant of summary judgment in favor of the District on these claims.

Plaintiffs, however, failed to meet their evidentiary burden with respect to discharges by the District into the Santa Clara River and Malibu Creek. Plaintiffs did not provide evidence sufficient for the district court to determine if stormwater discharged from an ms4 controlled by the District caused or contributed to pollution exceedances located in these two rivers. Similarly, Plaintiffs did not delineate [*4] how stormwater from ms4s controlled by the County caused or contributed to exceedances in any of the Watershed Rivers. Accordingly, we affirm the district court's grant of summary judgment in favor of the Defendants on these claims.

FACTUAL AND PROCEDURAL BACKGROUND

I. Stormwater Runoff in Los Angeles County

A. The MS4

Stormwater runoff is surface water generated by precipitation events, such as rainstorms, which flows over streets, parking lots, commercial sites, and other developed parcels of land. Whereas natural, vegetated soil can absorb rainwater and capture pollutants, paved surfaces and developed land can do neither. When stormwater flows over urban environs, it collects "suspended metals, sediments, algae-promoting nutrients (nitrogen and phosphorus), floatable trash, used motor oil, raw sewage, pesticides, and other toxic contaminants[.]" *Envtl. Def. Ctr., Inc. v. EPA, 344 F.3d 832, 840 (9th Cir. 2003)*. This runoff is a major contributor to water pollution in Southern California rivers and the Pacific Ocean and contributes to the sickening of many ocean users each year.

The County is a sprawling 4,500 square-mile amalgam of populous incorporated cities and significant swaths of [*5] unincorporated land. The District is a public entity governed by the Los Angeles County Board of Supervisors and the Department of Public Works. The District is comprised of 84 cities and some unincorporated areas of the County. The County and the District are separate legal entities.

In the District, stormwater runoff is collected by thousands of storm drains located in each municipality and channeled to a storm sewer system. The municipalities in the District operate ms4s [1] to collect and channel stormwater. The County also operates an ms4 for certain unincorporated areas. Unlike a sanitary sewer system, which transports municipal sewage for treatment at a wastewater facility, or a combined sewer system, which transports sewage and stormwater for treatment, ms4s contain and convey only untreated stormwater. *See 40 C.F.R. § 122.26(a)(7), (b)(8)*. In the County, municipal ms4s are "highly interconnected" because the District allows each municipality to connect its storm drains to the District's extensive flood-control and storm-sewer infrastructure (the MS4). [2] That infrastructure includes 500 miles of open channels and 2,800 miles of storm drains. The length of the [MS4] system, and [*6] the locations of all storm drain connections, are not known exactly, as a comprehensive map of the storm drain system does not exist. While the number and location of storm drains are too numerous to catalogue, it is undisputed that the MS4 collects and channels stormwater runoff from across the County. That stormwater is channeled in the MS4 to various watercourses including the four Watershed Rivers at the heart of this litigation: the Los Angeles River, the San Gabriel River, the Santa Clara River, and Malibu Creek. The Watershed Rivers drain into the Pacific Ocean at Santa Monica Bay, Los Angeles Harbor, and Long Beach Harbor.

1 Under Federal Regulations, an ms4 is:

> a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):
>
> (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body . . . having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a

> sewer district, flood control district or drainage district, or similar entity . . [*7] .
>
> (ii) Designed or used for collecting or conveying storm water;
>
> (iii) Which is not a combined sewer; and
>
> (iv) Which is not part of a Publicly Owned Treatment Works (POTW). . . .

40 C.F.R. § 122.26(b)(8).

2 Throughout this Opinion, reference is made to both "ms4" and "*the* MS4." The former is a generic reference to municipal separate storm sewer systems without regard to their particular location, while the latter specifically refers to the flood control and storm-sewer infrastructure described *supra* that exists in the County and is controlled by the District.

The gravamen of Plaintiffs' action is that by allowing untreated and heavily-polluted stormwater to flow unabated from the MS4 into the Watershed Rivers, and eventually into the Pacific Ocean, Defendants have violated the Clean Water Act.

B. The Clean Water Act and NPDES Permit

The Clean Water Act is the nation's primary water-pollution-control law. The Act's purpose is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." *33 U.S.C. § 1251(a)*. "To serve those ends, the Act prohibits 'the discharge of any pollutant by any person' unless done in compliance with some provision of the Act." *S. Fl. Water Mgmt. Dist. v. Miccosukee Tribe of Indians, 541 U.S. 95, 102, 124 S. Ct. 1537, 158 L. Ed. 2d 264 (2004)* [*8] (quoting *33 U.S.C. § 1311(a)*). "Discharge of a pollutant" is defined as "any addition of any pollutant to navigable waters from any point source[.]" *33 U.S.C. § 1362(12)*; see *Comm. to Save Mokelumne River v. East Bay Mun. Util. Dist., 13 F.3d 305, 308 (9th Cir. 1993)* (characterizing "discharge" as " 'add[ing]' pollutants from the outside world to navigable water").

Under the Clean Water Act, ms4s fall under the definition of "point sources." *33 U.S.C. § 1362(14)*. A point source is "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." *33 U.S.C. § 1362(14)*.

A person or entity wishing to add pollutants to navigable waters must comply with the NPDES, which "requires dischargers to obtain permits that place limits on the type and quantity of pollutants that can be released into the Nation's waters." *Miccosukee Tribe, 541 U.S. at 102*; *33 U.S.C. § 1342(a), (p)*. The Act "generally prohibits the 'discharge of any pollutant' . . . *from a 'point source'* into [*9] the navigable waters of the United States' " unless the point source is covered by an NPDES permit. *Defenders of Wildlife v. Browner, 191 F.3d 1159, 1163 (9th Cir. 1999)* (quoting *33 U.S.C. §§ 1311(a), 1362(12)(A)*) (emphasis added); *see also Arkansas v. Oklahoma, 503 U.S. 91, 101-02, 112 S. Ct. 1046, 117 L. Ed. 2d 239 (1992)* (describing NPDES permitting system). An NPDES permit requires its holder--the "permittee"--to follow the requirements of numerous Clean Water Act provisions, *see 33 U.S.C. § 1342(a)*, which include effluent limitations, water-quality standards, water monitoring obligations, public reporting mechanisms, and certain discharge requirements. *See id. §§ 1311, 1312, 1314, 1316, 1317, 1318, 1343.*

The Act uses two water-quality-performance standards, by which a discharger of water may be evaluated--"effluent limitations" and "water quality standards." *Arkansas v. Oklahoma, 503 U.S. at 101* (citing *33 U.S.C. §§ 1311, 1313, 1314*); *see also Sierra Club v. Union Oil Co. of Calif., 813 F.2d 1480, 1483 (9th Cir. 1987), vacated on other grounds, 485 U.S. 931, 108 S. Ct. 1102, 99 L. Ed. 2d 264 (1988), reinstated, 853 F.2d 667 (9th Cir. 1988)*. An effluent limitation is "any restriction established by a State or the [Environmental Protection Agency (EPA)] [*10] Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters. . . ." *33 U.S.C. § 1362(11)*. An effluent-limitation guideline is determined in light of " 'the best practicable control technology currently available.' " *Union Oil, 813 F.2d at 1483* (quoting *33 U.S.C. § 1311(b)(1)(A)*).

Water-quality standards "are used as a supplementary basis for effluent limitations, so that numerous dischargers, despite their individual compliance with technology-based limitations, can be regulated to prevent water quality from falling below acceptable levels." *Union Oil, 813 F.2d at 1483* (citing *EPA v. Calif. ex rel. State Water Res. Control Bd., 426 U.S. 200, 205 n.12, 96 S. Ct. 2022, 48 L. Ed. 2d 578 (1976)* (hereafter *EPA v. Calif.*)). Water-quality standards are developed in a two-step process. First, the EPA, or state water authorities establish a waterway's "beneficial use." *Natural Res. Def. Council, Inc. v. EPA, 16 F.3d 1395, 1400 (4th Cir. 1993)*; *see also Cal. Water Code § 13050(f)* (" 'Beneficial uses' of the waters of the state that may be protected against quality degradation include, but are not limited

to, domestic, [*11] municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves."). Once the beneficial use is determined, water quality criteria that will yield the desired water conditions are formulated and implemented. *See NRDC v. EPA, 16 F.3d at 1400*; *see also 33 U.S.C. § 1313(a), (c)(2)(A)*; *40 C.F.R. § 131.3(i)* ("Water quality standards are provisions of State or Federal law which consist of a designated use or uses for the waters of the United States and water quality criteria for such waters based upon such uses.").

Unlike effluent limitations, which are promulgated by the EPA to achieve a certain level of pollution reduction in light of available technology, water-quality standards emanate from the state boards charged with managing their domestic water resources. *See Arkansas v. Oklahoma, 503 U.S. at 101*. The EPA gives the states guidance in drafting water-quality standards and "state authorities periodically review water quality standards and secure the EPA's approval of any revisions in the standards." *Id.*

The EPA has authorized the State of California [*12] to develop water-quality standards and issue NPDES permits. Under the Porter-Cologne Water Quality Control Act, California state law designates the State Water Resources Control Board and nine regional boards as the principal state agencies for enforcing federal and state water pollution law and for issuing permits. *See Cal. Water Code §§ 13000, 13001, 13140, 13240, 13370, 13377*. Beginning in 1990, the California State Water Resources Control Board for the Los Angeles Region (the Regional Board) issued an NPDES permit (the Permit) to cover stormwater discharges by the County, the District, and 84 incorporated municipalities in the County (collectively the Permittees or Co-Permittees). [3] *See City of Arcadia v. State Water Res. Control Bd., 191 Cal. App. 4th 156, 119 Cal. Rptr. 3d 232, 240-41 (Cal. Ct. App. 2010)*. The Permit was renewed in 1996, 2001, 2006, and 2007.

> 3 "Co-permittee means a permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator." *40 C.F.R. § 122.26(b)(1)*.

The Permit is divided into two broad sections: findings by the Regional Board and an order authorizing and governing the Permittees' discharges (Order). The findings cover [*13] many introductory and background subjects, including a history of NPDES permitting in the County; applicable state and federal laws governing stormwater discharges; studies conducted by the County and researchers about the deleterious effects of polluted stormwater; coverage and implementation provisions; and guidelines for administrative review of Permit provisions. The Permit covers "all areas within the boundaries of the Permittee municipalities . . . over which they have regulatory jurisdiction as well as unincorporated areas in Los Angeles County within the jurisdiction of the Regional Board." In total, the Permit governs municipal stormwater discharge across more than 3,100 square miles of land in the County.

The Permit relates the many federal and state regulations governing stormwater discharges to Southern California's watercourses. Among these regulations is the Water Quality Control Plan for the Los Angeles Region (the Basin Plan). Under California law, the regional boards' "water quality plans, called 'basin plans,' must address the beneficial uses to be protected as well as water quality objectives, and they must establish a program of implementation." *City of Arcadia, 119 Cal. Rptr. 3d at 240* [*14] (quoting *City of Burbank v. State Water Res. Control Bd., 35 Cal. 4th 613, 26 Cal. Rptr. 3d 304, 108 P.3d 862, 865 (Cal. 2005)* (citing *Cal. Water Code § 13050(j)*)). The Permit provides that "[t]he Basin Plan designates beneficial uses of receiving waters and specifies both narrative and numerical water quality objectives for the receiving water in Los Angeles County." "Receiving waters" are defined as "all surface water bodies in the Los Angeles Region that are identified in the Basin Plan." "Permittees are to assure that storm water discharges from the MS4 shall neither cause nor contribute to the exceedance of water quality standards and objectives nor create conditions of nuisance in the receiving waters, and that the discharge of non-storm water to the MS4 has been effectively prohibited." The Permit incorporates and adopts the Basin Plan, which sets limits on bacteria and contaminants for the receiving waters of Southern California. The water-quality standards limit, among other pollutants, the levels of ammonia, fecal coliform bacteria, arsenic, mercury, and cyanide in Southern California's inland rivers.

The Permit contains myriad prohibitions and conditions regarding discharges into and from the MS4. Under Part 1, [*15] the Permittees are directed to "effectively prohibit non-storm water discharges into the MS4 and watercourses" unless allowed by an NPDES permit. Under Part 2, titled "Receiving Water Limitations," "discharges from the MS4 that cause or contribute to the violation of the Water Quality Standards or water quality objectives are prohibited." The "Water Quality Standards and Water Quality Objectives" are defined in the Permit as "water quality criteria contained in the Basin Plan, the California Ocean Plan, the National Toxics Rule, the California Toxics Rule, and other state or federal approved surface water quality plans. Such plans are used by the Regional Board to regulate all discharges, including storm water discharges."

The Permit provides that Permittees "shall comply" with the MS4 discharge prohibitions "through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with [the Los Angeles Stormwater Quality Management Program (SQMP)] and its components and other requirements of this Order. . . ." The SQMP includes "descriptions of programs, collectively developed by the Permittees in accordance with provisions of the NPDES [*16] Permit, to comply with applicable federal and state law." The Permit sets out a procedure to ensure Permittee compliance when any water-quality standards are breached:

> a) Upon a determination by either the Permittee or the Regional Board that discharges are causing or contributing to an exceedance of an applicable Water Quality Standard, the Permittee shall promptly notify and thereafter submit a Receiving Water Limitations (RWL) Compliance Report . . . to the Regional Board that describes [Best Management Practices (BMPs)] that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedances of Water Quality Standards.
>
> . . .
>
> c) Within 30 days following the approval of the RWL Compliance Report, the Permittee shall revise the SQMP and its components and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, an implementation schedule, and any additional monitoring required.
>
> d) Implement the revised SQMP and its components and monitoring program according to the approved schedule.
>
> . . . So long as the Permittee has complied with the procedures [*17] set forth above and is implementing the revised SQMP and its components, the Permittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the Regional Board to develop additional BMPs.

When a violation arises, a Permittee must adhere to the procedures in its Compliance Report until the exceedances abate.

The Permit requires the Permittees, *inter alia*, to reduce pollution in stormwater to the "maximum extent practicable [(MEP)]." Each Permittee is vested with the "necessary legal authority" to prohibit discharges to the MS4, and is directed to develop stormwater and urban runoff ordinances for its jurisdiction.

The Permit has both self-monitoring and public-reporting requirements, which include: (1) monitoring of "mass emissions" at seven mass emission monitoring stations; (2) Water Column Toxicity Monitoring; (3) Tributary Monitoring; (4) Shoreline Monitoring; (5) Trash Monitoring; (6) Estuary Sampling; (7) Bioassessment; and (8) Special Studies.

This case concerns high levels of pollutants, particularly heavy metals and fecal bacteria, identified by mass-emissions monitoring stations for the four [*18] Watershed Rivers (the Monitoring Stations). Mass-emissions monitoring measures *all* constituents present in water, and the readings give a cumulative picture of the pollutant load in a water-body. According to the Permit, the purpose of mass-emissions monitoring is to (1) estimate the mass emissions from the MS4, (2) assess trends in the mass emissions over time, and (3) determine if the MS4 is contributing to exceedances of Water Quality Standards by comparing results to the applicable standards in the Basin Plan. The Permit establishes that the Principal Permittee, which is the District, shall monitor the mass-emissions stations. The Permit requires that mass-emission readings be taken five times per year for the Watershed Rivers.

The Los Angeles River and San Gabriel River Monitoring Stations are located in a channelized portion of the MS4 that is owned and operated by the District. *See* Excerpts of Record at 11; *see also* Dist. Ct. Docket No. 101: Declaration of Aaron Colangelo Ex. N: Deposition of Mark Pestrella at 476-78. The Los Angeles River Monitoring Station is located in the City of Long Beach in "a concrete lined trapezoidal channel." [4] The Los Angeles River Monitoring Station [*19] measures "total upstream tributary drainage" of 825 square miles, as the Los Angeles River is the largest watershed outlet in the County. The San Gabriel River Monitoring Station is located in Pico Rivera and measures an upstream tributary watershed of 450 square miles.

4 "Section Two: Site Descriptions," Los Angeles Cnty. Dept. of Pub. Works, *available at* http://dpw.lacounty.gov/wmd/npdes/9899_report/SiteDesc.pdf (last accessed Mar. 2, 2011); *see also* "Section Two: Site Descriptions," Los An-

geles Cnty. Dept. of Pub. Works, *available at* http://dpw.lacounty.gov/wmd/NPDES/2006-07_report%5CSection%202.pdf (last accessed Mar. 2, 2011).

The Malibu Creek Monitoring Station is not located within a channelized portion of the MS4 but at an "existing stream gage station" near Malibu Canyon Road. It measures 105 miles of tributary watershed. The Santa Clara River Monitoring Station is located in the City of Santa Clara and measures an upstream tributary area of 411 square miles. [5]

5 "Section Two: Site Descriptions," Los Angeles Cnty. Dept. of Pub. Works, available at http://dpw.lacounty.gov/wmd/NPDES/2006-07_report%5CSection%202.pdf (last accessed Mar. 2, 2011).

C. Water-Quality Exceedances in the [*20] Watershed Rivers

Between 2002 and 2008, the four Monitoring Stations identified hundreds of exceedances of the Permit's water-quality standards. These water-quality exceedances are not disputed. For instance, monitoring for the Los Angeles and San Gabriel Rivers showed 140 separate exceedances. These included high levels of aluminum, copper, cyanide, fecal coliform bacteria, and zinc in the rivers. Further, ocean monitoring at Surfrider Beach showed that there were 126 separate bacteria exceedances on 79 days, including 29 days where the fecal coliform bacteria limit was exceeded.

The District admits that it conveys pollutants via the MS4, but contends that its infrastructure alone does not generate or discharge pollutants. According to Defendants, the District conveys the collective discharges of the numerous "up-sewer" municipalities. Moreover, Defendants identify thousands of permitted dischargers whose pollutants are reaching the Watershed Rivers:

> (1) Los Angeles River watershed: (a) at least 1,344 NPDES-permitted industrial and 488 construction stormwater dischargers allowed to discharge during the time period relevant to the case; (b) three waste-water treatment plants; and (c) [*21] 42 separate incorporated cities within the Los Angeles River watershed discharging into the river upstream of the mass emission station.
>
> (2) San Gabriel River watershed: (a) at least 276 industrial and 232 construction stormwater dischargers during the relevant time period; (b) at least 20 other industrial dischargers that were specifically permitted to discharge pollutants in excess of the water quality standards at issue in this action; (c) two wastewater treatment plants; and (d) 21 separate incorporated cities discharging into the watershed upstream of the mass emission station.
>
> (3) Santa Clara River watershed: (a) eight dischargers permitted by industrial wastewater discharge permits where the limits in the permit allowed discharges of pollutants at concentrations higher than the water quality standards which plaintiffs contend were exceeded; (b) approximately 26 industrial and 187 construction stormwater dischargers; and (c) the Saugus Wastewater Reclamation Plant.
>
> (4) Malibu Creek watershed: (a) seven industrial wastewater dischargers; and (b) at least five permitted discharges under the general industrial stormwater permit and at least 16 construction sites permitted to discharge [*22] under the general construction stormwater permit.

II. Proceedings before the District Court

Based on data self-reported by Defendants, Plaintiffs catalogued the water-quality exceedances in the Watershed Rivers. Beginning on May 31, 2007, Plaintiffs sent a series of notice letters to Defendants concerning these exceedances. On March 3, 2008, based on these purported violations, Plaintiffs commenced this citizen-enforcement action. After the district court dismissed certain elements of Plaintiffs' initial complaint because notice of the Permit violations was defective, Plaintiffs sent Defendants an adequate notice letter on July 3, 2008.

Plaintiffs filed the First Amended Complaint (Complaint) on September 18, 2008. In the Complaint, Plaintiffs assert six causes of action under the Clean Water Act. Only the first four of Plaintiffs' claims, which relate to the exceedances in the Watershed Rivers, and which the district court designated the "Watershed Claims," are before us. The first three Watershed Claims allege that, beginning in 2002 or 2003, the District and the County caused or contributed to exceedances of water-quality standards in the Santa Clara River (Claim 1), the Los Angeles [*23] River (Claim 2), and the San Gabriel

River (Claim 3), in violation of *33 U.S.C. §§ 1311(a), 1342(p)*. The fourth Watershed Claim alleges that, beginning in 2002, Defendants caused or contributed to exceedances of the water quality standards and violated the Total Maximum Daily Load (TMDL) limits in Malibu Creek. Plaintiffs' four Watershed Claims each rest on the same premise: (1) the Permit sets water-quality limits for each of the four rivers; (2) the mass-emissions stations have recorded exceedances of those standards; (3) an exceedance is non-compliance with the Permit and, thereby, the Clean Water Act; and (4) Defendants, as holders of the Permit and operators of the MS4, are liable under the Act.

Before the district court, Plaintiffs moved for partial summary judgment on two of the Watershed Claims: the Los Angeles River and San Gabriel River exceedances. Defendants cross-moved for summary judgment on all four Watershed Claims.

In a March 2, 2010 Order, the district court denied each cross-motion for summary judgment on the Watershed Claims. *NRDC v. County of Los Angeles, No. 08 Civ. 1467 (AHM), 2010 U.S. Dist. LEXIS 25083, 2010 WL 761287 (C.D. Cal. Mar. 2, 2010), amended on other grounds, 2011 U.S. Dist. LEXIS 11665, 2011 WL 666875 (C.D. Cal. Jan. 27, 2011)*. [*24] Although the district court accepted Plaintiffs' arguments that the Permit "clearly prohibits 'discharges from the MS4 that cause or contribute to the violation of Water Quality Standards or water quality objectives,' " *2010 U.S. Dist. LEXIS 25083, 2010 WL 761287, at *6*, and that mass-monitoring stations "are the proper monitoring locations to determine if the MS4 is contributing to exceedances [of the Water Quality Standards or water quality objectives,]" *id.*, the district court held that Plaintiffs were attempting to establish liability without presenting evidence of who was responsible for the stormwater discharge. The district court observed that although "the District is responsible for the pollutants in the MS4" at the time they pass the mass-emissions stations, "that does not necessarily determine the question of whether the water passing by these points is a 'discharge' within the meaning of the Permit and the Clean Water Act." *2010 U.S. Dist. LEXIS 25083, [WL] at *7*. Unable to decipher from the record where the MS4 ended and the Watershed Rivers begin, or whether any upstream outflows were contributing stormwater to the MS4, the district court stated that "Plaintiffs would need to present some evidence (monitoring data or an admission) [*25] that some amount of a standards-exceeding pollutant is being discharged though at least one District outlet." *2010 U.S. Dist. LEXIS 25083, [WL] at *8*.

Following supplemental briefing, the district court again determined that "Plaintiffs failed to present evidence that the standards-exceeding pollutants passed through the Defendants' MS4 *outflows* at or near the time the exceedances were observed. Nor did Plaintiffs provide any evidence that the mass emissions stations themselves are located at or near a Defendant's outflow." The district court thereupon entered summary judgment for Defendants on all four Watershed Claims.

Under *Fed. R. Civ. P. 54(b)*, the district court entered a partial final judgment on the Watershed Claims because they were "factually and legally severable" from the other claims and "[t]he parties and the Court would benefit from appellate resolution of the central legal question underlying the watershed claims: what level of proof is necessary to establish defendants' liability." Plaintiffs timely appeal.

JURISDICTION AND STANDARD OF REVIEW

We have jurisdiction under *28 U.S.C. § 1291*.

We review the district court's grant of summary judgment in a Clean Water Act enforcement action de novo. *Assoc. to Protect Hammersley, Eld, and Totten Inlets v. Taylor Res., Inc., 299 F.3d 1007, 1009 (9th Cir. 2002)* [*26] (citing *Waste Action Project v. Dawn Mining Corp., 137 F.3d 1426, 1428 (9th Cir. 1998))*.

DISCUSSION

Determining whether the County or the District violated the Permit's conditions, and thereby the Clean Water Act, requires us to examine whether an exceedance at a mass-emission monitoring station is a Permit violation, and, if so, whether it is beyond dispute that Defendants discharged pollutants that caused or contributed to water-quality exceedances.

I. Whether Exceedances at Mass-Emission Stations Constitute Permit Violations

"The Clean Water Act regulates the discharge of pollutants into navigable waters, prohibiting their discharge unless certain statutory exceptions apply." *Russian River Watershed Protection Comm. v. City of Santa Rosa, 142 F.3d 1136, 1138 (9th Cir. 1998)* (citing *33 U.S.C. § 1311(a)*). One such exception is for discharges by entities or individuals who hold NPDES permits. *Id.* The NPDES permitting program is the "centerpiece" of the Clean Water Act and the primary method for enforcing the effluent and water-quality standards established by the EPA and state governments. *Am. Iron & Steel Inst. v. EPA, 115 F.3d 979, 990, 325 U.S. App. D.C. 76 (D.C. Cir. 1997)*; *see also Nw. Envtl. Advocates v. City of Portland, 56 F.3d 979, 986-90 (9th Cir. 1995)* [*27] ("Citizen suits to enforce water quality standards effectuate complementary provisions of the CWA and the underlying purpose of the statute as a whole."); *Friends of the Everglades v. S. Fla. Water Mgmt. Dist., 570 F.3d*

1210, 1225 (11th Cir. 2009) (citing *Nat'l Wildlife Fed'n v. Gorsuch, 693 F.2d 156,175-76, 224 U.S. App. D.C. 41 (D.C. Cir. 1982)* ("There is indeed some basis in the legislative history for the position that Congress viewed the NPDES program as its most effective weapon against pollution.")).

To decipher the meaning and enforceability of NPDES permit terms, we interpret the unambiguous language contained in the permit. *Russian River, 142 F.3d at 1141.* We review a permit's provisions and meaning as we would any contract or legal document. *See Nw. Envtl. Advocates, 56 F.3d at 982.* As described *supra*, the Permit prohibits MS4 discharges into receiving waters that exceed the Water Quality Standards established in the Basin Plan and elsewhere. Specifically, Section 2.1 provides: "[D]ischarges from the MS4 that cause or contribute to the violation of Water Quality Standards or water quality objectives are prohibited." Section 2.2 of the Permit reads: "Discharges from the MS4 of storm water, or non-storm [*28] water, for which a Permittee is responsible for, shall not cause or contribute to a condition of nuisance."

Nevertheless, Defendants contend that exceedances observed at mass-emissions stations cannot establish liability on behalf of any individual Permittee. Their argument in this respect, as we discuss more thoroughly *infra*, relies heavily on their belief that the record is bereft of evidence connecting Defendants to the water-quality exceedances. Defendants also assert that the mass-emissions stations are "neither designed nor intended" to measure the compliance of any Permittee and, therefore, cannot form the basis for a Permit violation. Defendants also argue that municipal compliance with an NPDES stormwater permit cannot be reviewed under the same regulatory framework as a private entity or individual. In support of this contention, Defendants cite to a 1990 EPA rule:

> When enacting this provision, Congress was aware of the difficulties in regulating discharges from municipal separate storm sewers solely through traditional end-of-pipe treatment and intended for EPA and NPDES States to develop permit requirements that were much broader in nature than requirements which are traditionally [*29] found in NPDES permits for industrial process discharges or POTWs. The legislative history indicates, municipal storm sewer system "permits will not necessarily be like industrial discharge permits." Often, an end-of-the-pipe treatment technology is not appropriate for this type of discharge.

Brief of Appellees 33 (quoting "National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges," *55 Fed. Reg. 47,990, 48,037-38 (Nov. 16, 1990)).*

As we detail *infra*, neither the statutory development of the Clean Water Act nor the plain language of EPA regulations supports Defendants' arguments that NPDES permit violations are less enforceable or unenforceable in the municipal-stormwater context. In fact, since the inception of the NPDES, Congress has expanded NPDES permitting to bring municipal dischargers within the Clean Water Act's coverage.

A. Regulating MS4 Operators

The NPDES permitting program originated in the 1972 amendments to the Clean Water Act. Pub. L. 92-500, § 2, 86 Stat. 88,, *reprinted in* 1972 U.S.C.C.A.N. 3668 (codified as amended at *33 U.S.C. § 1342*). At the time, the NPDES program was viewed "as the primary means of enforcing the Act's [*30] effluent limitations." *Natural Res. Def. Council v. Costle, 568 F.2d 1369, 1371, 186 U.S. App. D.C. 147 (D.C. Cir. 1977)*; *see also Natural Res. Def. Council, Inc. v. EPA, 966 F.2d 1292, 1295 (9th Cir. 1992)* (examining statutory history of 1972 amendments to the Clean Water Act) (hereafter *NRDC v. EPA*). The permitting program is codified at *Section 402* of the Clean Water Act. *33 U.S.C. § 1342.* In 1973, the EPA promulgated regulations categorically exempting "discharges from a number of classes of point sources . . . including . . . separate storm sewers containing only storm runoff uncontaminated by any industrial or commercial activity." *Costle, 568 F.2d at 1372* (citing 40 C.F.R. § 125.4 (1975)). The EPA's exemption of certain point sources, including ms4s, from Section 402's blanket requirement was invalidated by the United States Court of Appeals for the District of Columbia Circuit in *Costle. Id. at 1376-77.* The *Costle* court highlighted that "[t]he wording of the [CWA], legislative history, and precedents are clear: the EPA Administrator does not have authority to exempt categories of point sources from the permit requirements of *§ 402.*" *Id. at 1377.*

In the ten-year period following the *Costle* decision, [*31] the EPA did not promulgate regulations addressing discharges by ms4 operators. *See NRDC v. EPA, 966 F.2d at 1296* (citing "National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges; Application Deadlines," *56 Fed. Reg. 56,548 (1991)).* In 1987, after continued nonfeasance by the EPA, Congress enacted the Water Quality Act amendments to the Clean Water Act to regulate stormwater discharges from, *inter alia*, ms4s. See *Defenders of Wildlife, 191 F.3d at 1163* ("Ultimately, in

1987, Congress enacted the Water Quality Act amendments to the CWA."); *NRDC v. EPA, 966 F.2d at 1296* ("Recognizing both the environmental threat posed by storm water runoff and EPA's problems in implementing regulations, Congress passed the Water Quality Act of 1987[.]") (internal citations omitted); *see also 55 Fed. Reg. 47,994* ("[P]ermits for discharges from municipal separate storm sewer systems must require controls to reduce the discharge of pollutants to the maximum extent practicable, and where necessary water quality-based controls, and must include a requirement to effectively prohibit non-storm water discharges into the storm sewers. Furthermore, EPA in consultation [*32] with State and local officials must develop a comprehensive program to designate and regulate other storm water discharges to protect water quality.").

The principal effect of the 1987 amendments was to expand the coverage of *Section 402*'s permitting requirements. *NRDC v. EPA, 966 F.2d at 1296*. *Section 402(p)* established a "phased and tiered approach" for NPDES permitting. *Nw. Envtl. Def. Ctr. v. Brown, 617 F.3d 1176, 1193 (9th Cir. 2010)* (citing *33 U.S.C. § 1342(p)(2)*). "The purpose of this approach was to allow EPA and the states to focus their attention on the most serious problems first." *NRDC v. EPA, 966 F.2d at 1296*. "Phase I" included "five categories of stormwater discharges," deemed "the most significant sources of stormwater pollution," who were required to obtain an NPDES permit for their stormwater discharge by 1990. *Brown, 617 F.3d at 1193* (citing *33 U.S.C. § 1342(p)(2)*). The five categories of the most serious discharge were:

> (p) Municipal and industrial stormwater discharges
>
> . . .
>
> (2) . . .
>
> . . .
>
> (A) A discharge with respect to which a permit has been issued under this section before February 4, 1987.
>
> (B) A discharge associated with industrial activity.
>
> (C) *A discharge from a municipal* [*33] *separate storm sewer system serving a population of 250,000 or more.*
>
> (D) *A discharge from a municipal separate storm sewer system serving a population of 100,000 or more but less than 250,000.*
>
> (E) A discharge for which the Administrator or the State, as the case may be, determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

33 U.S.C. § 1342(p)(2) (emphases added). Of the five categories of Phase I dischargers required to obtain the first permits, two are ms4 operators: municipalities with populations over 250,000, and municipalities with populations between 100,000 and 250,000. *Id. § 1342(p)(2)(C)-(D)*. Indeed, as noted *supra*, the Permit at issue here was first authorized in 1990 pursuant to the 1987 amendments.

Rather than regulate individual sources of runoff, such as churches, schools and residential property (which one Congressman described as a potential "nightmare"), [6] and as regulations prior to 1987 theoretically required, Congress put the NPDES permitting requirement at the municipal level to ease the burden of administering the program. *Brown, 617 F.3d at 1193*. [*34] That assumption of municipal control is found in the Permit at issue here--Part 3.G.2 of the Permit states that "Permittees shall posses adequate legal authority to . . . [r]equire persons within their jurisdiction to comply with conditions in Permittee's ordinances, permits, contracts, model programs, or orders (i.e. hold dischargers to its MS4 accountable for their contributions of pollutants and flows.)[.]"

> 6 *See* 131 Cong. Rec. 15616, 15657 (Jun. 13, 1985) (Statement of Sen. Wallop) ("[The regulations] can be interpreted to require everyone who has a device to divert, gather, or collect stormwater runoff and snowmelt to get a permit from EPA as a point source. . . . Requiring a permit for these kinds of stormwater runoff conveyance systems would be an administrative nightmare.").

Defendants' position that they are subject to a less rigorous or unenforceable regulatory scheme for their

stormwater discharges cannot be reconciled with the significant legislative history showing Congress's intent to bring ms4 operators under the NPDES-permitting system. Even the selectively excerpted regulatory language Defendants present to us--"Congress was aware of the difficulties in regulating discharges [*35] from municipal separate storm sewers . . . [and] intended for EPA and NPDES States to develop permit requirements that were much broader in nature than requirements which are traditionally found in NPDES permits"-- does not support Defendants' view. Indeed, this excerpt is but one paragraph from a longer section titled, "Site-Specific Storm Water Quality Management Programs for Municipal Systems." *55 Fed. Reg. 48,037-38*. The quoted language follows a paragraph which reads:

> *Section 402(p)(3)(B)(iii)* of the CWA mandates that permits for discharges from municipal separate storm sewers *shall require controls to reduce the discharge of pollutants* to the maximum extent practicable (MEP), including management practices, control techniques and systems, design and engineering methods, and such other provisions as the Director determines appropriate for the control of such pollutants.

55 Fed. Reg. 48,038 (emphasis added). The use of such language--employing "mandates" and commands to regulate --hardly supports Defendants' notion that NPDES permits are unenforceable against municipalities for their stormwater discharges. Moreover, the paragraphs that follow the excerpt explain why developing system-wide [*36] controls to manage municipal stormwater is preferable to controlling pollution through end-of-pipe effluent technologies. *Id.* The regulations highlight that "Congress recognized that permit requirements for municipal separate storm sewer systems should be developed in a flexible manner to allow site-specific permit conditions to reflect the wide range of impacts that can be associated with these discharges." *Id.* Rather than evincing any intent to treat permitting "differently" for municipalities, the EPA merely explains why state authorities that issue permits should draft site-specific rules, as the Regional Board did here, and why *water-quality standards* may be preferable over more-difficult-to-enforce effluent limitations. Avoiding wooden permitting requirements and granting states flexibility in setting forth requirements is not equivalent to immunizing municipalities for stormwater discharges that violate the provisions of a permit.

B. Enforcement of Mass-Emissions Violations

Part and parcel with Defendants' argument that they are subject to a relaxed regulatory structure is their view that the Permit's language indicates that mass-emissions monitoring is not intended to be enforced [*37] against municipal dischargers. Defendants claim that measuring water-quality serves only an hortatory purpose--as Defendants state, "the mass emission monitoring program . . . neither measures nor was designed to measure any individual permittee's compliance with the Permit." This proposition, which if accepted would emasculate the Permit, is unsupported by either our case law or the plain language of the Permit conditions.

"The plain language of CWA § 505 authorizes citizens to enforce *all* permit conditions." *Nw. Envtl. Advocates, 56 F.3d at 986* (emphasis in original). We used these words, and emphasized "*all*" permit conditions, because the language of the Clean Water Act is clear in its intent to guard against all sources and superintendents of water pollution and "clearly contemplates citizen suits to enforce 'a permit or condition thereof.' " *Id.* (citing *33 U.S.C. § 1365(f)(2), (f)(6)*); *see also W. Va. Highlands Conservancy, Inc. v. Huffman, 625 F.3d 159, 167 (4th Cir. 2010)* ("In other words, the statute takes the water's point of view: water is indifferent about who initially polluted it so long as pollution continues to occur.").

We have previously addressed, and rejected, municipal [*38] attempts to avoid NPDES permit enforcement. In *Northwest Environmental Advocates*, we considered a citizen-suit challenging the City of Portland's operation of a combined sewer system which periodically overflowed and discharged raw sewage into two rivers. *56 F.3d at 981-82*. The plaintiffs brought suit on the basis of an NPDES permit condition which "prohibit[ed] any discharges that would violate Oregon water quality standards." *Id. at 985*. Reviewing the history of the 1972 amendments and the Supreme Court's decision in *PUD No.1 of Jefferson County v. Washington Department of Ecology, 511 U.S. 700, 114 S. Ct. 1900, 128 L. Ed. 2d 716 (1994)*, we recognized that Congress had authorized enforcement of state water-quality standards, lest municipalities be immunized on the technicality that not all water standards can be expressed as effluent limitations. *Id. at 988-89*. The overflows from the Portland sewer system were "caused primarily by uncontrollable events--*i.e.*, the amount of stormwater entering the system[.]" *Id. at 989*. Because the total amount of water entering and leaving the sewer system was unknown, it was impossible to articulate effluent standards which would "ensure that the gross amount of pollution discharged [*39] [would] not violate water quality standards." *Id.* Only by enforcing the water-quality standards *themselves* as the limits could the purpose of the CWA and the NPDES system be effectuated. *Id. at 988-90*. Indeed, we noted that prior to the 1972 incorporation of

effluent limitations, the Clean Water Act depended entirely on enforcement *based on water-quality standards. Id. at 986.* However, troubled by the " 'almost total lack of enforcement' " under the old system, Congress added the effluent limitation standards "not to supplant the old system" but to "improve enforcement." *Id. at 986* (quoting S. Rep. No. 414, 92d Cong., 2d Sess. 2 (1972), *reprinted in* 1972 U.S.C.C.A.N. 3668, 3671).

Moreover, the plain language of the Permit countenances enforcement of the water-quality standards when exceedances are detected by the various compliance mechanisms, including mass-emissions monitoring. First, the Permit incorporates and adopts the Basin Plan, which sets the water-quality standards for bacteria and contaminants for the receiving waters of Southern California, including the Watershed Rivers. The Permit then sets out a multi-part monitoring program for those standards, the goals of which explicitly [*40] include "[a]ssessing compliance with this Order[.]" "Compliance" under the Clean Water Act primarily means adhering to the terms and conditions of an NPDES permit. *EPA v. Calif., 426 U.S. at 223* ("Thus, the principal means of enforcing the pollution control and abatement provisions of the Amendments is to enforce compliance with a permit."). The first monitoring program listed in the Permit is "Mass Emissions." While Defendants are correct in noting that mass-emissions monitoring has as one of its goals "estimat[ing] the mass emissions from the MS4," Defendants fail to mention that another goal, listed just below "estimating," is "[d]etermin[ing] if the MS4 is contributing to exceedances of Water Quality Standards."

Part 6.D of the Permit, titled "Duty to Comply," lays any doubts about municipal compliance to rest: "Each Permittee *must comply with all terms*, requirements, and conditions of this Order. Any violation of this order constitutes a violation of the Clean Water Act . . . *and is grounds for enforcement action*, Order termination, Order revocation and reissuance, denial of an application for reissuance; or a combination thereof[.]" This unequivocal language is unsurprising given [*41] that all NPDES permits must include monitoring provisions ensuring that permit conditions are satisfied. *See 33 U.S.C. § 1318(a)(A)* ("[T]he Administrator [of the EPA] shall require the owner or operator of any point source to (i) establish and maintain such records, (ii) make such reports, (iii) install, use, and maintain such monitoring equipment or methods (including where appropriate, biological monitoring methods), [and] (iv) sample such effluents (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe)[.]"); *40 C.F.R. § 122.44(i)(1)* (specifying the monitoring requirements for compliance, "mass . . . for each pollutant limited in the permit," and volume of effluent discharged); *Ackels v. EPA, 7 F.3d 862, 866 (9th Cir. 1993)* ("[T]he Act grants EPA broad authority to require NPDES permitees to monitor, at such intervals as the Administrator shall prescribe, whenever it is required to carry out the objectives of the Act.").

Our prior case law emphasizes that NPDES permit enforcement is not scattershot--each permit term is simply enforced as written. *See Union Oil, 813 F.2d at 1491* ("It is unclear whether the court [*42] intended to excuse these violations under the upset defense or under a de minimis theory. In either event, the district court erred. The Clean Water Act and the regulations promulgated under it make no provision for 'rare' violations."); *see also United States v. CPS Chem. Co., 779 F. Supp. 437, 442 (D. Ark. 1991)* ("For enforcement purposes, a permittee's [Discharge Monitoring Reports] constitute admissions regarding the levels of effluents that the permittee has discharged."). As we explained in *Union Oil*, Congress structured the CWA to function by self-monitoring and self-reporting of violations to " 'avoid the necessity of lengthy fact finding, investigations, and negotiations at the time of enforcement.' " *813 F.2d at 1492* (quoting S. Rep. No. 414, 92d Cong., 1st Sess. 64, *reprinted in* 1972 U.S.C.C.A.N. 3668, 3730). When self-reported exceedances of an NPDES permit occur, the Clean Water Act allows citizens to bring suit to enforce the terms of the Permit.

In sum, the Permit's provisions plainly specify that the mass-emissions monitoring is intended to measure compliance and that "[a]ny violation of this Order" is a Clean Water Act violation. The Permit is available for public inspection [*43] to aid this purpose. Accordingly, we agree with the district court's determination that an exceedance detected through mass-emissions monitoring is a Permit violation that gives rise to liability for contributing dischargers.

II. Evidence of Discharge

We next turn to the factual issue on which the district court granted summary judgement in favor of Defendants--whether any evidence in the record shows Defendants discharged stormwater that caused or contributed to water-quality violations. The district court determined that a factual basis was lacking:

> Plaintiffs failed to present evidence that the standards-exceeding pollutants passed through the Defendants' MS4 *outflows* at or near the time the exceedances were observed. Nor did Plaintiffs provide any evidence that the mass emissions stations themselves are located at or near a Defendant's outflow. Plaintiffs do represent in their supplemental briefing

> that their monitoring data reflects sampling conducted at or near Defendants' outflows. . . . However, the declarations on which Plaintiffs rely do not clearly indicate that the sampling in question was conducted at an outflow (as opposed to in-stream).
>
> . . .
>
> In short, Plaintiffs have failed [*44] to follow the Court's instructions and present data which could establish that "standards-exceeding pollutants . . . passed through Defendants' MS4 *outflows* at or near the time the exceedances were observed." That the pollutants must have passed through an outflow is key because, as the Court found in the March 2 Order, standards-exceeding pollutants must have passed through a County or District outflow in order to constitute a discharge under the Clean Water Act and the Permit.

Plaintiffs have argued throughout this litigation that the measured exceedances in the Watershed Rivers *ipso facto* establish Permit violations by Defendants. Because these points are designated in the Permit for purposes of assessing "compliance," this argument is facially appealing. But the Clean Water Act does not prohibit "undisputed" exceedances; it prohibits "discharges" that are *not* in compliance with the Act (which means in compliance with the NPDES). *See 33 U.S.C. § 1311(a); see also Miccosukee Tribe, 541 U.S. at 102.* While it may be undisputed that exceedances have been detected, responsibility for those exceedances requires proof that some entity discharged a pollutant. Indeed, the Permit specifically [*45] states that "*discharges* from the MS4 that cause or contribute to the violation of the Water Quality Standards or water quality objectives *are prohibited.*"

"[D]ischarge of pollutant" is defined as "any addition of any pollutant to navigable waters from any point source[.]" *33 U.S.C. § 1362(12).* Under the Clean Water Act, the MS4 is a "Point Source." *See 33 U.S.C. § 1342(p)(2), 1362(14).* "Navigable waters" is used interchangeably with "waters of the United States." *See Headwaters, Inc. v. Talent Irrigation Dist., 243 F.3d 526, 532 (9th Cir. 2001).* Those terms mean, *inter alia,* "[a]ll waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide[.]" *40 C.F.R. § 122.2.* The Watershed Rivers are all navigable waters.

Thus, the primary factual dispute between the parties is whether the evidence shows any *addition* of pollutants by Defendants to the Watershed Rivers. Defendants contend that the "District does not generate any of the pollutants in the system, but only transports them from other permitted and non-permitted sources." Moreover, Defendants contend that by [*46] measuring mass-emissions downstream from where the pollutants entered the sewer system, it is not possible to pinpoint which entity, if any, is responsible for adding them to the rivers. In the words of the district court, there is no evidence that "standards-exceeding pollutants . . . passed through Defendants' MS4 *outflows* at or near the time the exceedances were observed." Plaintiffs counter that the monitoring stations are downstream from hundreds of miles of storm drains which have generated the pollutants being detected. To Plaintiffs, it is irrelevant which of the thousands of storm drains were the source of polluted stormwater--as holders of the Permit, Defendants bear responsibility for the detected exceedances.

Resolving this dispute over whether Defendants added pollutants depends heavily on the level of generality at which the facts are viewed. At the broadest level, all sides agree with basic hydrology--upland water becomes polluted as it runs over urbanized land and begins a downhill flow, first through municipal storm drains, then into the MS4 which carries the water (and everything in it) to the Watershed Rivers, which flow into the Pacific Ocean. More narrowly, it is, [*47] as Plaintiffs concede, impossible to identify the particular storm drains that had, for instance, some fecal bacteria which contributed to a water-quality violation. Ultimately, each side fails to rebut the other's arguments. Defendants ignore their role as controllers of thousands of miles of MS4 and the stormwater it conveys [7] by demanding that Plaintiffs engage in the Sisyphean task of testing *particular* storm drains in the County for the source of each pollutant. Likewise, Plaintiffs did not enlighten the district court with sufficient evidence for certain claims and assumed it was obvious to anyone how stormwater makes its way from a parking lot in Pasadena into the MS4, through a mass-emissions station, and then to a Watershed River.

7 Defendants' untenable position about their responsibility for discharges is confirmed by the testimony of their Rule 30(b)(6) witness:

> *Question*: What if those flows [which exceeded water-quality standards] were so polluted with oil and grease that they *were on fire as they came out of the system*? Would your view be the

> same, that the District is not contributing to exceedances?
>
> *Answer*: That the system the District maintains is not contributing to, [*48] yes.

Despite shortcomings in each side's arguments, there is evidence in the record showing that polluted stormwater from the MS4 was added to two of the Watershed Rivers: the Los Angeles River and San Gabriel River. Because the mass-emissions stations, as the appropriate locations to measure compliance, for these two rivers are located in a section of the MS4 owned and operated by the District, when pollutants were detected, they had *not* yet exited the point source into navigable waters. As such, there is no question over who controlled the polluted stormwater at the time it was measured or who caused or contributed to the exceedances when that water was again discharged to the rivers--in both cases, the District. As a matter of law and fact, the MS4 is distinct from the two navigable rivers; the MS4 is an intra-state man-made construction--not a naturally occurring Watershed River. *See Headwaters, 243 F.3d at 533* ("The EPA has interpreted 'waters of the United States' to include 'intrastate lakes, rivers, streams (including intermittent streams) . . . the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce' and 'tributaries of [those] [*49] waters.' " (quoting *40 C.F.R. § 122.2(c), (e)*). At least some outfalls for the MS4 were downstream from the mass-emissions stations. *See 40 C.F.R. § 122.26(b)(9)* ("Outfall means a point source . . . at the point where a municipal separate storm sewer discharges to waters of the United States . . . ."). The discharge from a point source occurred when the stillpolluted stormwater flowed out of the concrete channels where the Monitoring Stations are located, through an outfall, and into the navigable waterways. We agree with Plaintiffs that the precise location of each outfall is ultimately irrelevant because there is no dispute that MS4 eventually adds stormwater to the Los Angeles and San Gabriel Rivers downstream from the Monitoring Stations.

Although the District argues that merely channeling pollutants created by other municipalities or industrial NPDES permittees should not create liability because the District is not an instrument of "addition" or "generation," [8] the Clean Water Act does not distinguish between those who add and those who convey what is added by others--the Act is indifferent to the originator of water pollution. As Judge Wilkinson of the Fourth Circuit cogently framed [*50] it: "[The Act] bans 'the discharge of any pollutant by any person' regardless of whether that 'person' was the root cause or merely *the current superintendent of the discharge*." *Huffman, 625 F.3d at 167* (emphasis added). "Point sources" include instruments that channel water, such as "any pipe, ditch, *channel*, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." *33 U.S.C. § 1362(14)* (emphasis added). The EPA's regulations further specify that ms4 operators require permits for channeling: "Discharge of a pollutant . . . includes additions of pollutants into waters of the United States from: surface runoff which is collected or *channelled* by man; discharges through pipes, sewers, or other conveyances owned by a State [or] municipality." *40 C.F.R. § 122.2* (emphasis added). "[M]ost urban runoff is discharged through conveyances such as separate storm sewers or other conveyances which are point sources under the CWA. These discharges are subject to the NPDES program." *55 Fed. Reg. 47,991*. Finally, the Supreme Court stated in *Miccosukee Tribe* that "the [*51] definition of 'discharge of a pollutant' contained in *§ 1362(12) . . . includes* within its reach point sources that do not themselves generate pollutants." *541 U.S. at 105* (emphasis added).

> 8 This issue does not usually arise in Clean Water Act litigation because it is generally assumed that ms4s "discharge" stormwater. *See, e.g., Miss. River Revival v. Adm'r, E.P.A., 107 F. Supp. 2d 1008, 1009 (D. Minn. 2000)* ("These lawsuits involve the discharge of storm water into the Mississippi River through the Cities' storm sewers. Thus, and this is not in dispute, the storm water discharge is subject to the NPDES permitting requirements.").

Accordingly, the district court erred in stating that "Plaintiffs have not provided the Court with the necessary evidence to establish that the Los Angeles River and the San Gabriel River below the mass emissions monitoring stations are bodies of water that are distinct from the MS4 above these monitoring stations." In light of the evidence that the Los Angeles River and San Gabriel River mass-emission stations are in concrete portions of the MS4 controlled by the District, it is beyond dispute that the District is discharging pollutants from the MS4 to the [*52] Los Angeles River and San Gabriel River in violation of the Permit. Thus, Plaintiffs are entitled to summary judgment on Claims 2 and 3.

However, we agree with the district court that, as the record is currently constituted, it is not possible to mete out responsibility for exceedances detected in the Santa Clara River and Malibu Creek (Claims 1 and 4). Like the district court, we are unable to identify the relationship between the MS4 and these mass-emissions stations. From the record, it appears that both monitoring stations

are located within the rivers themselves. Plaintiffs have not endeavored to provide the Court with a map or cogent explanation of the inter-workings or connections of this complicated drainage system. We recognize that both the Santa Clara and Malibu Creek Monitoring Stations are downstream from hundreds or thousands of storm drains and MS4 channels. It is highly likely, but on this record nothing more than assumption, that polluted stormwater exits the MS4 controlled by the District and the County, and flows downstream in these rivers past the mass-emissions stations. To establish a violation, Plaintiffs were obligated to spell out this process for the district [*53] court's consideration and to spotlight how the flow of water from an ms4 "contributed" to a water-quality exceedance detected at the Monitoring Stations. *See, e.g., Nicholas Acoustics & Specialty Co. v. H & M Constr. Co., 695 F.2d 839, 846-47 (5th Cir. 1983)* ("We wish to emphasize most strongly that it is foolhardy for counsel to rely on a court to find disputed issues of material fact not highlighted by counsel's paperwork; a party that has suffered the consequences of summary judgment below has a definite and specific duty to point out the thwarting facts . . . . Judges are not ferrets!"). Contrary to Plaintiffs' contention, this would not require independent sampling of the District's outfalls. Indeed, simply ruling out the other contributors of stormwater to these two rivers or following up to vague answers given by Defendants' witnesses could have satisfied Plaintiffs' evidentiary obligation. In the alternative, prior to commencing actions like this one, Plaintiffs could heed the district court's sensible observation and, for purposes of their evidentiary burden, "sample from *at least one* outflow that included a standards-exceeding pollutant[.]"

Finally, for all four Watershed [*54] Rivers, the record is silent regarding the path stormwater takes from the unincorporated land controlled by the County to the Monitoring Stations. The district court correctly demanded evidence for the County's liability, which Plaintiffs did not proffer.

In sum, Plaintiffs were entitled to summary judgment on Claims 2 and 3 against the District for the Los Angeles River and San Gabriel River because (1) the Monitoring Stations for these two rivers are located in a portion of the MS4 owned and operated by the District, (2) these Monitoring Stations detected pollutants in excess of the amount authorized by the NPDES permit, and (3) this polluted water "discharged" into the Los Angeles River and San Gabriel River. The Plaintiffs, however, have not met their burden on summary judgment for their other claims because they did not provide the district court with evidence that the MS4 controlled by the District "discharged" pollutants that passed through the Monitoring Stations in the Santa Clara River and Malibu Creek, or that ms4s controlled by the County "discharged" pollutants that passed through the Monitoring Stations in any of the four rivers in question.

CONCLUSION

The district court's [*55] judgment for Defendant District on Claims 2 and 3 of the First Amended Complaint is REVERSED, and this matter is REMANDED to the district court for further proceedings consistent with this opinion. The district court's grant of summary judgment for Defendant District on Claims 1 and 4, and for Defendant County on all Watershed Claims, is AFFIRMED.

AFFIRMED IN PART, REVERSED IN PART, and REMANDED.

Each party shall bear its own costs on appeal.