California Regional Water Quality Control Board
San Diego Region

Response to Comments Report

Tentative Order No. R9-2013-0026
NPDES NO. CAG719000

General Waste Discharge Requirements
for
Discharges from Boatyards and Boat Maintenance and Repair Facilities Adjacent to Surface Waters Within the San Diego Region

May 8, 2013

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EXECUTIVE SUMMARY

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) has prepared this Response to Comments Report on Tentative Order No. R9-2013-0026, *General Waste Discharge Requirements for Discharges from Boatyards and Boat Maintenance and Repair Facilities Adjacent to Surface Waters Within the San Diego Region* (Tentative Order).

On February 8, 2013, the San Diego Water Board released the Tentative Order for a thirty (30) day public comment period. Comments were due by the close of business on March 11, 2013. The San Diego Water Board received comments from the following entities:

A. United States Environmental Protection Agency (USEPA)
B. Mr. Aladdin Masry – e-mail sent 2/14/13 at 8:59 a.m.
C. Mr. Aladdin Masry – e-mail sent 2/14/13 at 9:43 a.m.
D. Unified Port of San Diego
E. City of San Diego
F. San Diego Port Tenants Association and San Diego Bay Boatyards
G. Department of the Navy
H. City of Oceanside

The San Diego Water Board's response to these comments follows.

A. Comments from USEPA submitted via email on February 8, 2013

1. With regards to toxicity testing, will Dischargers be required to conduct one multi-species screening or four?

   RESPONSE TO A.1: The Tentative Order has been modified to clarify that the USEPA *National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document* (TST) requires Dischargers to conduct one multi-species screening instead of four. See section IV.A.1 of Attachment E to the Revised Tentative Order.

2. For topsmelt, there needs to be a sentence added to clarify the alpha as being 0.25

   RESPONSE TO A.2: No change to the Tentative Order is warranted. The topsmelt chronic alpha is specified in the USEPA *National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document* that is incorporated in the Tentative Order by reference.

3. In Section IV.B. 3 there is no need to cite the acute manual as they are being required do a chronic topsmelt test as part of the three species screening.

   RESPONSE TO A.3: The Tentative Order has been modified as requested. See section IV.B.3 of Attachment E to the Revised Tentative Order.

4. Under Section IV.D.a.v. – remove chlorine and ammonia

   RESPONSE TO A.4: The Tentative Order has been modified as requested. See section IV.D.1.a.v. of the Revised Tentative Order.

B. Comments from Mr. Aladdin M. Masry on behalf of Oceanside Marine Centre, Inc. by letter dated December 7, 2012 resubmitted by e-mail dated February 14, 2013

1. The General Order should eliminate monitoring for TBT, settleable and floating solids, and BOD.

   RESPONSE TO B.1: The Tentative Order has been modified to eliminate monitoring for Biochemical Oxygen Demand (BOD). Monitoring for tributyltin (TBT), total suspended solids (TSS), and settleable solids, however, will be retained. See Table E-3 of Attachment E to the Tentative Order. As outlined in the Fact Sheet of the Tentative Order, pollutants of concern associated with storm water discharges from Boatyards and boat repair and maintenance facilities includes BOD, copper, pH, TSS, oil and grease, Total Organic Carbon

(TOC), and zinc. Monitoring for TBT is required due to the potential presence of TBT hull bottom paint on vessels maintained or repaired at the Boatyard facilities. Monitoring for TSS is required to ensure proper operation and maintenance of the BMP or treatment facilities. BOD is a pollutant of concern, but BOD analysis can be eliminated because Chemical Oxygen Demand (COD) analysis is also required. COD is preferable to BOD for monitoring industrial storm water because 1) it measures the requirement of dissolved oxygen for oxidation of both organic and inorganic constituents and 2) it is a more rapidly measurable parameter as compared to the BOD test which is conducted over a period of five days. The San Diego Water Board has determined that the pollutants listed in Table E-3 of Attachment E to the Revised Tentative Order represent an appropriate set of indicator parameters sufficient to determine the effectiveness of BMPs in reducing or preventing pollutants in storm water discharges from the Boatyard facilities.

C. Comments from Mr. Aladdin M. Masry on behalf of Oceanside Marine Centre, Inc. by letter dated December 20, 2012 resubmitted by e-mail dated February 14, 2013

1. Sediment Monitoring is only justified for low-energy embayments (as in lagoons and estuaries) of well-defined subtidal zones. Sampling the constantly moving "superficial" marine sediments is inconclusive and non-scientific. This is in addition of the annual dredging of hundred-thousand tons of marine sediments.

   RESPONSE TO C.1: No change to the Tentative Order is warranted. *The Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality* (Sediment Quality Plan) applies to enclosed bays and estuaries. Oceanside Marine Harbor is an enclosed bay as defined in the Sediment Quality Plan. The Sediment Quality Plan further stipulates that it "applies to subtidal surficial sediments that have been deposited or emplaced seaward of the intertidal zone." The National Oceanic and Atmospheric Administration defines the intertidal zone as the area between high and low tides. The sediment adjacent to Oceanside Marine Centre is submerged at all times, is below the low tide line, and is seaward of the intertidal zone. The Sediment Quality Plan sediment monitoring requirements do apply to sediment adjacent to Oceanside Marine Centre because they are subtidal surficial sediments.

   The Sediment Quality Plan establishes methods and procedures to integrate sediment chemistry, toxicity and benthic community measures to determine if the sediment dependent biota are protected or degraded as a result of exposure to toxic pollutants in sediment and to protect human health.

The Oceanside Harbor Maintenance Project (Project) is regulated by the San Diego Water Board's Water Quality Certification Number 12C-030. The Project consists of annual maintenance dredging of the entrance channel to Oceanside Harbor, the Del Mar Channel, and the Oceanside Channel to re-establish suitable navigation depth at federally authorized dimensions, and disposal of the dredged material along the shoreline in Oceanside, CA. Oceanside Marine Centre is not adjacent or near these dredging areas so this dredging is unlikely to affect the sediments adjacent to Oceanside Marine Centre.

2. Monitoring for settleable solids at the point of discharge to detect illicit discharges would be more appropriate than sampling marine sediments.

   RESPONSE TO C.2: No change to the Tentative Order is warranted. Monitoring for settleable solids is required as one of several methods of determining if the treatment system is adequately maintained and if BMPs are properly implemented. Sampling sediments is another way to assess compliance in the receiving waters and is applicable for point source discharges regulated under NPDES permits. Moreover, pursuant to Section VII.B of the State Water Board's *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality* (Sediment Quality Plan), NPDES dischargers are required to monitor marine sediments to determine if compliance with the aquatic life sediment quality objective has been attained. The aquatic life sediment quality objective is described in in Section VII.J.1 and J.2 of the Tentative Order. In conformance with the Sediment Quality Plan, the Tentative Order requires dischargers to evaluate three lines of evidence - sediment chemistry, toxicity, and benthic community condition - to assess whether the aquatic life sediment quality objective has been attained. Monitoring settable solids at the point of discharge as suggested by the commenter is clearly not a sufficient basis to make this assessment.

D. Comments from the Unified Port of San Diego by letter dated March 6, 2013

1. The Port supports and appreciates the removal of the RHMP as a named monitoring coalition from the Administrative Draft General Boatyard Permit.

   RESPONSE TO D.1. No change to the Tentative Order is warranted.

E. Comments from the City of San Diego by letter dated March 11, 2013

1. The City believes that implementing chronic toxicity testing on samples collected prior to the point of discharge during qualifying storm events as described in Attachment E Section IV.A.1 is not representative of the impact of storm water runoff on marine species. Freshwater discharges to marine

environments will create conditions in the immediate zone of influence that cannot be tolerated by marine species, regardless of storm water cleanliness. A receiving water dilution zone should be considered for compliance purposes in marine receiving water environments influenced by freshwater runoff.

RESPONSE TO E.1. No change to the Tentative Order is warranted at this time. The Clean Water Act prohibits the discharge of a pollutant by any person except as authorized under specified statutory sections. The term "discharge of a pollutant" is defined as "any addition of any pollutant to navigable waters from any point source." It's important to note that water alone is not a pollutant under the Clean Water Act and the lower level of salinity in storm water as compared to marine waters is also not a pollutant. Storm events occur naturally and the infusion of the resulting fresh water runoff into San Diego Bay would and does occur regardless of the runoff passing through the Boatyards on the way to San Diego Bay. The end-of-pipe chronic toxicity testing required under the Tentative Order is meant to detect the aggregate toxic effects caused by monitored known pollutants such as copper and zinc, as well as the toxic effects of unmeasured pollutants in the industrial storm water discharge. Based on all of these considerations, the discharge of lower levels of salinity in storm water (absent pollutants) to marine waters is generally not subject to Clean Water Act regulation and is not a consideration in designating the end-of pipe sampling point for chronic toxicity in the Tentative Order.

The Water Quality Control Plan for the San Diego Basin (9) (Basin Plan) allows for the use of mixing zones on a case by case basis. A "mixing zone" is generally defined as a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality standards can be exceeded without causing adverse effects to the overall water body. Dilution credit is the amount of dilution granted to a discharge in the calculation of a water quality based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio which is determined through conducting a mixing zone study or modeling of the discharge and the receiving water. The availability of dilution is generally described as assimilative capacity. If the pollutant concentrations in the receiving water equal or exceed the water quality standard concentration, then no assimilative capacity exists to dilute the effluent for that pollutant, and the discharger must meet the water quality standard as an "end of pipe" effluent limitation with no dilution.

Guidance regarding use of mixing zones and dilution credits for toxic pollutants in non-storm water discharges is provided by the State Water Resources Control Board's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California, 2005* (State Implementation Policy or SIP). The SIP provides that allowance of mixing zones and dilution credits as described above is discretionary and is determined on a discharge-by-discharge and pollutant-by-pollutant basis.

Although the SIP does not directly apply to the regulation of storm water discharges, the SIP guidance would be relevant in considering mixing zones and dilution credits for industrial storm water discharges. The SIP provides that in general mixing zones must be as small as practicable and mixing zones shall not:

1. Compromise the integrity of the entire water body;
2. Cause acutely toxic conditions to aquatic life passing through the mixing zone;
3. Restrict the passage of aquatic life;
4. Adversely impact biologically sensitive or critical habitats, including, but not limited to, habitat of species listed under federal or State endangered species laws;
5. Produce undesirable or nuisance aquatic life;
6. Result in floating debris, oil, or scum;
7. Produce objectionable color, odor, taste, or turbidity;
8. Cause objectionable bottom deposits
9. Cause nuisance conditions in the receiving waters;
10. Dominate the receiving water body or overlap a mixing zone from different outfalls; or
11. Be allowed at or near any drinking water intake.

The San Diego Water Board has not established dilution credits or a mixing zone for any discharge to San Diego Bay primarily because of concerns about the limited assimilative capacity of the Bay for pollutants in waters where the ambient background concentrations of the pollutants exceed, or are close to exceeding, the applicable water quality standards. The issue is complex from a scientific viewpoint and involves consideration of various factors controlling bay circulation and flushing as well as pollutant movement and accumulation. The San Diego Water Board may consider allowing a mixing zone and dilution credits for San Diego Bay as suggested by the City in the future for select pollutants, but only if it is fully satisfied that the dischargers have conducted site specific studies to demonstrate that a mixing zone and dilution credit is appropriate and protective of water column and sediment related beneficial uses throughout the Bay. Any such studies must consider the ultimate fate of any pollutants and any impacts to receiving water and sediments throughout San Diego Bay and adjacent coastal waters outside the Bay.

The San Diego Water Board has had preliminary discussions with the Department of the Navy on the feasibility of a bay-wide study to determine if mixing zones and dilution credits would be appropriate for San Diego Bay and to evaluate possible methods of calculating a dilution credit and mixing zone for storm water discharges. Such a study would need to be bay-wide in scope and sufficient to support a Basin Plan amendment. The City of San Diego and other dischargers around San Diego Bay could participate with the Department of the

Navy in conducting a comprehensive dilution study for storm water discharges to San Diego Bay.

F. Comments from AMEC Environment & Infrastructure, Inc. on behalf of the San Diego Port Tenants Association and San Diego Bay Boatyards

1. On Table E-1 of the draft Monitoring and Reporting Program, Nielsen Beaumont Marine is required to monitor "SW-NMB" at "A representative sample location for the discharge of storm water to America's Cup Harbor, San Diego Bay." In fact, the new yard design at the upgraded Nielsen Beaumont Marine facility prevents all storm water discharges to America's Cup Harbor. Based upon this fact, it is requested that the description that Nielsen Beaumont Marine discharges storm water to America's Cup Harbor be deleted from the general permit. In fact, other San Diego Bay Boatyards have also been retrofitted so that they do not have a discharge to the Bay. This fact should be considered and Table E-1 revised accordingly.

   RESPONSE TO F.1. No change to the Tentative Order is warranted. The Tentative Order includes a description of each Boatyard and of the storm water capture mechanisms in section I.C of Attachment F, the Fact Sheet. Table E-1, Storm Water Monitoring Locations, describes locations where storm water would discharge if the capacity of storm water capture mechanisms is exceeded. In addition, the San Diego Water Board has added a Conditional Exclusion - No Exposure Certification (NEC) to the Revised Tentative Order which provides a pathway for dischargers to demonstrate that their facilities have no exposure of industrial activities and materials to storm water discharges or no discharge of storm water exposed to industrial activities and materials. Dischargers that meet the requirements of the No Exposure Certification are exempt from the requirement to prepare a Storm Water Pollution Prevention Plan (SWPPP) as well as sampling and monitoring requirements in the Order, except a SWPPP is required if secondary containment is used to satisfy NEC requirements. (See Revised Tentative Order at section I.C, section II, Finding R, section IX and Attachment J.)

2. It is requested that Conditional Exclusion - No Exposure Certification (NEC) language be added to Tentative Order No. R9-2013-0026; NPDES Permit No.CAG719001 so that a Boatyard, it they choose, can apply for a NEC exclusion.

   RESPONSE TO F.2: The Tentative Order has been modified to include No Exposure Certification language. See response to comment F.1.

3. The term "Category" is used throughout the draft NPDES Permit to describe the two types of Boatyard facilities covered by this permit as well as the monitoring requirements for each. Please note that in Section I – Boatyard Annual

Checklist, these facilities are referred to as Tier I and II. Please revise Section I to be consistent with the other sections of the permit

RESPONSE TO F.3: The Tentative Order has been modified. Please see Receiving and Sediment Monitoring language of Attachment I to the Revised Tentative Order.

4. Chronic toxicity testing of end-of-pipe storm water prior to entering a marine receiving water environment is inappropriate.

RESPONSE TO F.4. Some changes to the Tentative Order are warranted to clarify that additional Toxicity Reduction Evaluation (TRE) Work Plans are not required once a TRE is begun and to require receiving water monitoring during a discharge immediately in front of the discharge point. (See section VI.C.4, section I.A, and section V.A.2 of Attachment E to the Revised Tentative Order.) This comment included several bulleted points which are addressed individually below.

- The San Diego Water Board has been working with the United States Environmental Protection Agency (USEPA) to establish appropriate toxicity effluent limitations. The Boatyards currently have acute toxicity end-of-pipe effluent limitations and have had these effluent limitations in the Boatyard NPDES permits since 2000. To ensure protection of the receiving water from the sublethal effects of industrial storm water discharges on survival, growth, and reproduction of aquatic life, USEPA is recommending the use of chronic toxicity tests instead of acute toxicity tests. In addition, the State Water Board draft Policy for Toxicity Assessment and Control also recommends the use of chronic toxicity tests for storm water. Moreover, chronic toxicity testing on industrial storm water discharges is needed to determine compliance with the objective for toxicity established in the San Diego Water Board's *Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan). This toxicity objective is stated in section VII. J.1 of the Tentative Order and provides that all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, terrestrial animals, and aquatic organisms. The narrative toxicity objective is consistent with the requirements of the federal Clean Water Act Section 101(a)(3) which declares "that it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited."

- Fresh water can be toxic to marine organisms. See response to comment E.1.

- Storm water discharges are generally not saline enough to conduct toxicity tests on the required marine organisms. The USEPA *Short-term Methods*

for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Third Edition (EPA-821-R-02-014) allows for the salinity of the sample to be adjusted to the appropriate salinity. Two methods are available to adjust salinities – hypersaline brine (HSB) derived from natural seawater or artificial sea salts. HSB can be made from any high quality, filtered seawater by evaporation. HSB derived from natural seawater contains the necessary trace metals, biogenic colloids, and some of the microbial components necessary for adequate growth, survival, and/or reproduction of marine and estuarine organisms, and may be stored for prolonged periods without any apparent degradation.

- Although acute toxicity tests may be less expensive, the San Diego Water Board is being fully protective of water quality by requiring chronic toxicity tests and is following USEPA guidance. Chronic toxicity tests are more sensitive and more protective of water quality than acute toxicity tests. Moreover, chronic toxicity testing on industrial storm water discharges is needed to determine compliance with the objective for toxicity established in the San Diego Water Board's Basin Plan. This toxicity objective is stated in section VII. J.1 of the Tentative Order.

- The San Diego Water Board understands that end-of-pipe chronic toxicity testing of storm water discharges may indicate the discharges are toxic due to pollutant and salinity levels in the storm water while no toxicity is found in the receiving water. To be fully protective of water quality, the San Diego Water Board is establishing end-of-pipe effluent limitations for chronic toxicity with no allowance for a dilution credit. The San Diego Water Board may consider allowing a mixing zone and dilution credits for San Diego Bay in the future, but only if it is satisfied that the dischargers have conducted site specific studies to demonstrate that a mixing zone and dilution credit is appropriate. The Boatyards' current permits have end-of-pipe acute toxicity effluent limitations for storm water without dilution credits. The San Diego Water Board has taken the acute toxicity effluent limitations and changed them to chronic toxicity effluent limitations based on guidance from the USEPA and the State Water Resources Control Board. Chronic toxicity testing is more protective of the receiving water beneficial uses than acute toxicity testing because it provides a measure of the sublethal effects of a given discharge on survival, growth, and reproduction of aquatic life. Chronic toxicity tests also include an additional measurement of lethality because if the organisms die, the chronic toxicity test fails. Acute toxicity tests measure the adverse effect (usually mortality) during a short-term exposure and are a less stringent measure of the toxicity of a given discharge.

- Most of the Boatyards collect and retain all of their storm water without discharging to surface water. Only a discharge to surface water would

trigger chronic toxicity sampling and testing under the Tentative Order. If the first sample is toxic, the Boatyard must conduct an additional toxicity test. If the second sample is toxic, a Toxicity Reduction Evaluation (TRE) to identify and reduce or eliminate the cause of the toxicity is required. The monitoring program has been changed to reflect that only one TRE Work Plan is required. See section VI.C.4 of Attachment E to the Revised Tentative Order.

- Since 1998, when the State Water Board adopted Order WQ-98-07, advances have been made in the understanding of chronic toxicity tests and the use of the TST method for assessing toxicity test results. The USEPA, State Water Board and San Diego Water Board have concluded that chronic toxicity is a valid measurement for assessing the toxicity impacts of storm water on receiving waters. The State Water Board recently adopted Order 2012-0011-DWQ on September 19, 2012, for the California Department of Transportation, which requires use of the TST method for assessing chronic toxicity sample results for storm water runoff from outfalls greater than 18 inches when the discharge is to an Area of Special Biological Significance (ASBS).

- The Numeric Action Levels (NALs) are based on benchmarks in USEPA's Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP) effective September 29, 2008. The "benchmarks" are the pollutant concentrations above which USEPA determined represent levels of concern. The level of concern is a concentration at which a storm water discharge could potentially impair, or contribute to impairing, water quality or affect human health from ingestion of water or fish. If storm water concentrations are below the benchmarks, it is USEPA's view that a facility presents little potential for water quality concern.

- Receiving water toxicity sampling is required in the Tentative Order. The monitoring requirements have been changed to require sampling of the receiving water concurrent with the storm water discharge. (See section I.A and V.A.2 of Attachment E to the Revised Tentative Order.)

5. The language in Section I.A of the tentative Monitoring and Reporting Program should be revised to be consistent with new protocols for monitoring ASBS in the 2012 State of California Special Protections Requirements. The following language revision is recommended:

   All *effluent* samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitoring flow joins or is diluted by any other waste stream, body of water, or substance. *Receiving water monitoring shall occur in the mixing zone approximately 1 foot below the*

surface immediately in front of a monitored discharge. Monitoring locations shall not be changed without notification to and the approval of the San Diego Water Board.

RESPONSE TO F.5. The Tentative Order will be modified to incorporate sampling in the receiving water during a discharge similar to the changes suggested above. (See section I.A and V.A.2 of Attachment E, Monitoring and Reporting Program, to Revised Tentative Order No. R9-2013-0026.)

6. Recommend adding the following to Section III for clarification:

   Effluent samples shall be collected prior to the point of discharge, at the designated monitoring location for the effluent as specified in Tables E-1 and E-2. At minimum the sample shall consist of a single grab collected during the first four hours of runoff. A composite of several grab samples collected during the period when a runoff occurs is recommended if possible to better characterize discharged storm water effluent over the entire runoff event. Sampling methods should be the same for both analytical chemistry and toxicity analyses.

   Monitoring results shall be submitted annually with the annual report, as specified in Section VIII of this MRP.

   RESPONSE TO F.6. No change to the Tentative Order is warranted. Section I.A of Attachment E discusses sample collection before the point of discharge. Table E-3 specifies a grab sample be collected because composite samples are more expensive to collect and the improvement in data quality does not justify the expense in this case. Because only a grab sample is specified, it is not necessary to require the same sampling methods for chemistry and toxicity.

7. Replace chronic with acute for storm water effluent testing in Section III. Table E-3 of the Tentative Monitoring and Reporting Program.

   RESPONSE TO F.7. No change to the Tentative Order is warranted. See the response to comment F.4.

8. Add *Composite* Sample as an option in the Table under the sample type. Recommend grab as a minimum requirement, but a composite sample is preferred for TSS, settleable solids, COD, BOD, metals, and toxicity

   RESPONSE TO F.8. No change to the Tentative Order is warranted. Grab samples are required because composite samples are more expensive to collect and the improvement in data quality does not justify the expense in this case. Moreover, composite sampling of storm water events is problematic due to the variability in the duration and intensity of the storm event. Grab sampling

of storm events provides greater consistency for data collection and trend analysis.

9. This paragraph states that a "three-species sensitivity screening shall be conducted during the first sample collection under the permit." The following text states that "a minimum of four single concentration toxicity tests shall be performed for each species used."

   This seems conflicting and needs clarification. Based on a history of species sensitivity screens conducted in both storm water and receiving waters in San Diego Bay, the embryo larval development test will most likely always be the most sensitive test species of the proposed three.

   Based on information available now, a single three-species screen during each permit cycle seems plenty sufficient and resource conscious.

   RESPONSE TO F.9. The sentence about four single concentration toxicity tests has been removed. (See section IV.A.1 of Attachment E to the Revised Tentative Order.)

10. The proposed plant species, giant kelp, is not found growing in San Diego Bay. Unfortunately there is no other commonly used suitable marine west coast marine plant species that can be used for storm water monitoring. A recommendation for the third species in lieu of giant kelp would be to include a chronic exposure using the mysid shrimp Americamysis bahia. This species is already commonly used for acute toxicity testing of storm water around San Diego Bay, and this would also provide a more direct comparison to proposed continued acute exposures using this species for end-of-pipe monitoring.

    RESPONSE TO F.10. No change to the Tentative Order is warranted. Generally accepted toxicity testing procedures recommend including test species of a vertebrate, an invertebrate, and an aquatic plant. *The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy), *Water Quality Control Plan, Ocean Waters of California* (Ocean Plan), and draft *Policy for Toxicity Assessment and Control* (draft Toxicity Policy) all include this recommendation. USEPA recommended the purple sea urchin test as the invertebrate because this test is being used by other monitoring programs in San Diego Bay. The San Diego Water Board recognizes that giant kelp does not live in San Diego Bay, but it is the only accepted marine aquatic plant for use in determining chronic toxicity. Moreover, the giant kelp is an appropriate surrogate species for eel grass and other marine algae and plants that do live in San Diego Bay.

11. Addition of chronic toxicity monitoring in the receiving water is now included in the Tentative Order, but only one time each permit cycle.

    a. Understanding and mitigating impacts to the receiving waters is the ultimate goal, thus monitoring efforts need to be focused here.
    b. With such infrequent monitoring it will be impossible to assess any trends over time and whether or not implemented BMPs are effective at improving water quality.
    c. Concurrent chronic tests in the receiving water with end-of-pipe acute tests are proposed to identify connections between the two as described above in Comment #1.
    d. Recently adopted storm water monitoring efforts in California for coastal Areas of ASBS place a strong emphasis on the receiving waters for compliance determinations.
    e. A greater emphasis on monitoring of receiving waters as opposed to storm water at the end-of-pipe is also included in both the final Los Angeles Municipal Separate Storm Sewer System (MS4) Permit (Order No. R4-2012-0175) and the current draft San Diego Municipal Storm Water Permit (Tentative Order R9-2013-0001). Chronic toxicity testing is required, but only in the receiving waters below end-of-pipe discharges.

    RESPONSE TO F.11. The Tentative Order will be modified to also include receiving water monitoring during a storm below a discharge as shown in section I.A and V. of Attachment E, Monitoring and Reporting Program of the revised Tentative Order. In addition, chronic toxicity analysis will be required twice during the permit cycle instead of once to support use of the monitoring data for water quality assessment activities, trend analysis, and consistency with the other tests. The San Diego Water Board recognizes the importance of receiving water monitoring to assess the impacts of storm water discharges. Many storm water permits throughout the State as well as guidance in the State Water Quality Protection Areas and Marine Protected Areas amendment to the Ocean Plan include receiving water sampling during storms.

12. Add the following definition for acute toxicity:

    Acute toxicity tests measure the lethal effects of a discharge or ambient water sample over short time periods (up to 96 hours using standard EPA protocols).

    RESPONSE TO F.12. No change to the Tentative Order is warranted. See response to comment F.4.

G. Comments from the Navy by letter dated March 11, 2013

1. The proposed Order for the Boatyards includes chronic toxicity monitoring and effluent limits at the end-of-pipe. We oppose this approach. The Navy supports the use of toxicity testing in the receiving water when determined to be necessary to protect water quality.

   RESPONSE TO G.1. See response to comment F.4. The draft Regional Municipal Separate Storm Sewer System (MS4) permit, Order No. R9-2013-0001 requires samples of storm water runoff to be analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season in outfalls greater than 18 inches discharging to Areas of Special Biological Significance (ASBS). The State Water Board's *State Water Quality Protection Areas and Marine Protected Areas amendment to the Ocean Plan* adopted October 16, 2012, also requires sampling of storm water (end of pipe) for chronic toxicity for discharges to ASBS. An acute toxicity effluent limitation is included in the Boatyards' current NPDES permits. This acute toxicity effluent limitation is being changed to a chronic toxicity effluent limitation to better protect water quality and in accordance with guidance from USEPA. The end-of-pipe chronic toxicity effluent limitations are appropriate for the Boatyards.

2. Receiving water toxicity testing is consistent with the current draft State Water Board Policy for Toxicity Assessment and Control as well as the recently adopted Framework for Monitoring and Assessment in the San Diego Region.

   RESPONSE TO G.2. The current draft State Water Board *Policy for Toxicity Assessment* (Draft Toxicity Policy) discusses targeted sites and integrator sites. The Draft Toxicity Policy states "targeted sites are often located immediately downstream of a discrete source to determine if discharges from that source are important contributors to toxicity. Targeted sites are valuable because they may capture only a single source for characterization and assessment. The types of sites used for construction or industrial storm water permit monitoring programs would be a good example of a targeted site." The Boatyards are industrial sites adjacent to surface waters and they have a history of toxicity in storm water discharges. Monitoring toxicity at the end of pipe as well as in receiving waters is consistent with the Draft Toxicity Policy. In addition, the receiving water monitoring requirements have been improved.

   The Framework for Monitoring and Assessment in the San Diego Region was not intended to eliminate all end of pipe monitoring. An NPDES permit is required to have end of pipe monitoring for constituents with effluent limitations. A chronic toxicity effluent limitation has been established in the tentative Order for storm water. This toxicity effluent limitation is appropriate as discussed in response to comment G.1. End of pipe chronic toxicity monitoring in addition to

receiving water monitoring is appropriate for the Boatyards.

3. It is essential that the approach in applying water quality based standards, such as toxicity, be consistent for all storm water discharges that have the potential to impact water quality.

   RESPONSE TO G.3. The San Diego Water Board has a consistent approach to storm water toxicity monitoring. All Shipyard and Boatyard facilities adjacent to surface waters currently have end of pipe acute toxicity effluent limitations. Starting with this general permit and in future permits region-wide, the acute toxicity effluent limitations will be changed to chronic toxicity effluent limitations. The effluent limitations for toxicity have generally resulted in the capture and diversion of most storm water from these facilities to sewerage collection systems. Shipyards and Boatyards were identified as having a reasonable potential for toxicity in storm water many years ago. A performance goal for acute toxicity was established in 1995 for the Boatyards. USEPA regulations require that NPDES permits must include effluent limitations to control effluent toxicity where it is determined through a reasonable potential analysis that a discharge causes, has the reasonable potential to cause, or contribute to an excursion above a narrative toxicity criterion. (See 40 CFR 122.44(d)(1)(iv) and 40 CFR 122.44(d)(1)(v). In Clean Water Act parlance, the term “narrative criterion” refers to state water quality objectives for toxicity.) Accordingly in 2000, the performance goal was changed to an effluent limitation in the Boatyard NPDES permits.

4. Source control is the appropriate long-term mechanism to improve storm water discharges.

   RESPONSE TO G.4. The San Diego Water Board also believes that source control is an appropriate long-term mechanism to improve storm water discharges. The Tentative Order incorporates Numeric Action Levels (NALs) and procedures to achieve the NALs. If an NAL is exceeded, the Boatyard is in Level 1 and an additional evaluation of source controls is required.

H. Comments from the City of Oceanside by letter dated March 7, 2013

1. The City of Oceanside supports and appreciates the removal of the Regional Harbors Monitoring Program (RHMP) as a named monitoring coalition from the Administrative Draft General Boatyard Permit.

   RESPONSE TO H.1. No change to the Tentative Order is warranted.