

From: [Stransky, Chris](#)
To: [Rodriguez, Vicente@Waterboards](#); [Yaeger, Keith@Waterboards](#)
Cc: [Butch Hainsworth](#); [John Tyrell \(jestermh@gmail.com\)](#); [Buckley, Kate](#)
Subject: Boatyard Permit Comments - from Oceanside Marine Centre
Date: Thursday, August 29, 2019 8:57:16 PM
Attachments: [image.png](#)
[R9-2019-008-Comment-Letter-Boatyard-Permit-OMC.pdf](#)

Greetings Vicente and Keith,

Thank you kindly for the opportunity to comment on the San Diego Regional Water Board's (Regional Board) Tentative Order No. R9-2019-008 for boatyards and boat maintenance and repair facilities. We would like to also thank you kindly for the time you took to come out and visit us in person to review the tentative permit requirements. Attached is out letter with just a few comments we would like to have considered for the permit. Please don't hesitate reaching out if you have any questions.

Thank you kindly,
Chris

On behalf of Oceanside Marine Centre

CHRIS STRANSKY
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From: Rodriguez, Vicente@Waterboards <Vicente.Rodriguez@waterboards.ca.gov>
Sent: Thursday, August 1, 2019 8:17 AM
To: Stransky, Chris <chris.stransky@woodplc.com>; Yaeger, Keith@Waterboards <Keith.Yaeger@Waterboards.ca.gov>
Cc: Butch Hainsworth <butch.haines@gmail.com>; John Tyrell (jestermh@gmail.com) <jestermh@gmail.com>; Buckley, Kate <kate.buckley@woodplc.com>
Subject: RE: Oceanside Marine Centre - Meeting for the Boatyard Permit Aug 2

Hello Chris,

The planned location is at OMC.

I will be unavailable next Friday 8/9; however, we are available next Tue 8/6 or Wed 8/7 please let me know if that fits your schedule.

Thank you,
Vicente

From: Stransky, Chris <chris.stransky@woodplc.com>
Sent: Wednesday, July 31, 2019 12:36 PM
To: Rodriguez, Vicente@Waterboards <Vicente.Rodriguez@waterboards.ca.gov>; Yaeger, Keith@Waterboards <Keith.Yaeger@Waterboards.ca.gov>
Cc: Butch Hainsworth <butch.haines@gmail.com>; John Tyrell (jestermh@gmail.com) <jestermh@gmail.com>; Buckley, Kate <kate.buckley@woodplc.com>
Subject: Oceanside Marine Centre - Meeting for the Boatyard Permit Aug 2

Greetings Vicente and Keith,

Just checking in here on a meeting notice received by Oceanside Marine Centre for this Friday 8/2 at 2:00 regarding the latest draft Boatyard Permit. Can we please confirm the location – at the Regional Board or OMC? Ideally the meeting can be at the boatyard to walk around for a tour. Also, I just became aware of the meeting but would like to attend as well though I have planned to be out of town this Friday. So the second question is whether there also may be flexibility to move the meeting to next Friday at OMC?

Butch (cc'd) left a message but it sounds like you may be just coming back from vacation Vicente. So I've left a message with you as well Keith.

We look forward to hearing back from you soon and the great opportunity to meet up in person.

Thank you kindly,
Chris

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August 28, 2019

Vicente Rodriguez

Source Control Regulation Unit
San Diego Regional Water Board
2375 Northside Drive, Suite 100
San Diego, CA 92108-2700

VIA EMAIL: Vicente.Rodriguez@waterboards.ca.gov; and Keith.Yaeger@Waterboards.ca.gov;

SUBJECT: Comment Letter- Tentative Order No. R9-2019-008 (NPDES Permit No. CAG719001)

Dear Mr. Rodriguez,

Thank you for the opportunity to comment on the San Diego Regional Water Board's (Regional Board) Tentative Order No. R9-2019-008 under NPDES Permit No. CAG719001 (Permit) for boatyards and boat maintenance and repair facilities. Oceanside Marine Centre, Inc. (OMC) appreciates the efforts by the Regional Board to keep our bays and harbors pollution free and we thank you kindly for the time you took to come out and visit us in person to review the tentative permit requirements. We are extremely proud of the great efforts we have implemented over the years to maintain a clean facility that also uses an efficient and sophisticated system to treat and recycle stormwater collected on site from all but the largest rare storm events. We are committed to continuing to uphold and implement the regulations set forth in the revised Permit. The revised tentative Boatyard Permit is very similar to the existing permit which OMC has successfully incorporated into our daily routine. As such we have only the three main comments which were also discussed briefly during the site visit follows:

1. Test Species

- a. MRP Section III.B.3. Chronic Toxicity Marine Species Methods (page E-16). For the marine invertebrate test, the Permit only includes the egg fertilization test method using purple sea urchins and sand dollars, and the embryo-larval development static test using the red abalone. Although the egg fertilization test can be a good screening-level test, a number of flaws have been identified using this test for routine compliance test purposes (see Attachment A). It is suggested to also include the embryo-larval development test endpoints for the purple sea urchin and sand dollar. Both species have well-established EPA test methods¹, have been used in Whole Effluent Toxicity tests for decades, and are included in many NPDES permits, which include local facilities such as the Scripps Institution of Oceanography (SIO), NPDES No. CA0107239.

¹-U.S. Environmental Protection Agency (USEPA) 1995. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio (EPA/600/R-95/136).

2. Sample Holding Time

- a. MRP Section III.B.2. Sample Volume and Holding Time (page E-16). The current language states a maximum holding time of 36-hours. Due to the logistics and safety issues that arise during storm water sampling it is recommended that a not-to-exceed 72-hour holding time be allowed for toxicity test initiations with the protocol goal still 36-hours. This extended holding time is also consistent with a number of other existing NPDES Permits (e.g., NPDES No. CA0107239 and CA0109185).

Consistent with the SIO Permit (R9-2015-0070) and Naval Base Coronado Permit (R9-2015-0117), suggest the following language: *“All toxicity tests shall be conducted as soon as possible following sample collection. The 36-hour sample holding time for test initiation shall be targeted. However, no more than 72 hours shall elapse before the conclusion of sample collection and test initiation.”*

3. Sample Collection Timing

- a. MRP Section V.D.3 – Sampling and Analysis (page E-11). The Permit states that sample collections shall occur within 4-hours of runoff if conditions are safe. Due to safety issues, especially regarding sampling of the receiving water, we suggest including a clause similar to that included in the Industrial General Permit Order (NPDES No. CAS000001).

Consistent with the Industrial General Permit (NPDES No. CAS000001), suggest the following language: Samples from each discharge location shall be collected within four (4) hours of: (a) the start of the discharge, or (b) the start of facility operations if the QSE occurs within the previous 12-hour period (e.g., for storms with discharges that begin during the night for facilities with day-time operating hours). Sample collection is required during scheduled facility operating hours and when sampling conditions are safe in accordance with Section XI.C.6.a.ii.

Thank you kindly again for your outreach and consideration of these few comments. We look forward to your response and assisting with any questions or clarifications you might have.

If you have any questions regarding our facility, please contact Mr. John Tyrell at (619) 921-4811; jestermh@gmail.com. For any technical questions please also feel free to contact Mr. Chris Stransky (858) 300-4350; chris.stransky@woodplc.com, or Ms. Kate Buckley (858) 300-4329; kate.buckley@woodplc.com of Wood E&I.

Respectfully submitted by Oceanside Marine Centre,



John Tyrell
Jestermh@gmail.com
Oceanside Marine Centre, Inc.
1550 Harbor Drive North
Oceanside, CA 92054

ATTACHMENT A:
ECHINODERM EGG FERTILIZATION TEST METHOD ASSESSMENT

Echinoderm Egg Fertilization Test Method Assessment

3/12/15

Chris Stransky

Chris.stransky@woodplc.com

The echinoderm egg fertilization (sperm cell) test has frequently been used to assess toxicity of effluents and receiving waters since its initial development by Dinnel et al. (1983). It eventually became a standard EPA method using purple sea urchins and sand dollars in the 1995 West Coast Manual as an invertebrate test option for both NPDES compliance monitoring and special studies (EPA/600/R-95/136). This test method can serve as a great monitoring tool for certain circumstances when applied properly. However extra caution is also warranted when using or reviewing data derived using egg fertilization tests given that the method is more prone to variability that could lead to misleading or variable results relative to most other standard toxicity test methods. There are a number of key factors based on extensive experience that can affect the outcome of any given test as follows: 1) time elapsed between spawning and fertilization steps; 2) speed and consistency during inoculation; 3) the sperm/egg ratio chosen; 4) quality of the gametes; and 5) experience of the test technician and overall technique. There are specific parameters and quality assurance (QA) criteria for the test, but they allow for significant flexibility; the primary final acceptability criteria is > 70% mean fertilization in the controls. One of the biggest factors that may affect the test outcome is the sperm to egg ratio chosen for the test. A maximum 3000:1 sperm:egg ratio is allowed by the test protocol (as is 100% fertilization in the controls), though from extensive experience a much lower ratio is almost always sufficient to ensure a sensitive and consistent test. A range-finding pre-test can be performed to determine the most appropriate ratio which often varies widely, and though highly recommended, this is not performed by all labs. The egg fertilization test has been used for the regional Bight monitoring programs in southern California (2003, 2008, and 2013) and range-finding tests have been encouraged, but not required for participating labs. During intercalibration exercises for the Bight programs slight variations in the test method have been found to consistently cause challenges with regard to lab to lab comparability and post testing data interpretation. In fact in some cases repeated tests on the same or following day resulted in a different result for a single sample.

Another challenge with the egg fertilization test is that it is known to be particularly sensitive to a variety of natural factors (i.e. certain sized particles that can interfere with fertilization directly, or attract and divert sperm away from eggs; and slight changes in pH that can affect cell membrane processes and sperm motility). Finally, the egg fertilization test encompasses a very short exposure period (40 minutes total), and affects are related to a very specific mode of action – the fertilization process. Given the short term exposure, the egg fertilization test can be a particularly valuable tool to help identify the cause of toxicity in samples that may quickly lose their response, though a careful assessment to address potential confounding factors is always highly recommended.

Given some of these challenges, there has been a general movement in greater favor of the EPA- approved embryo development tests using sea urchins, and several other invertebrates including mussels, red abalone, and sand dollars (USEPA 1995). Like the egg fertilization test, the embryo development methods have been used for compliance and special study programs in the U.S. and elsewhere for over 20 years. Embryo development test methods are more straightforward and simple to perform relative to that for egg fertilization which include “optional” decisions and greater finesse. Embryo development exposures

are also longer in duration (48-96 hr.) and integrate a greater variety of cellular and biochemical processes than egg fertilization. Sensitivity of the embryo development endpoint to various chemicals have been found comparable to, and in some cases greater than that for egg fertilization. Finally, embryo development tests are also an accepted option for sediment quality objective (SQO) guidance; egg fertilization is not amenable to this test type.

In conclusion, the egg fertilization test is a great method for certain circumstances, but needs extra care with regard to implementing the test and subsequent data interpretation. Embryo development tests may be a preferable option for consideration in many cases.

Dinnel, P., Q. Stober, J. Link, M. Letourneau, W. Roberts, S. Felton, and R. Nakatani. 1983. Methodology and validation of a sperm cell toxicity test for testing toxic substances in marine waters. Final Report. Grant R/TOX. FRI-UW-83. University of Washington Sea Grant Program in cooperation with U. S. Environmental Protection Agency. 208 pp.

US EPA. 1995. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms. Environmental Monitoring and Support Laboratory, Cincinnati, Ohio (EPA/600/R-95/136).

*** Many of the points and opinions presented herein are based on personal experience (Chris Stransky, of AMEC). Additional supporting references for statements made herein are available if desired.*