SAN DIEGO REGIONAL BOARD RESPONSES TO COMMENTS ON
TENTATIVE ORDER NO. R9-2009-0099 and TENTATIVE TIME SCHEDULE ORDER NO. R9-2009-0117
GENERAL DYNAMICS NATIONAL STEEL AND SHIPBUILDING COMPANY (NASSCO)
AUGUST 12, 2009, REGIONAL BOARD MEETING

Item No. 08
Doc. No. 7

A. Comments submitted by Kelly E. Richardson of Latham and Watkins LLP on behalf of NASSCO, dated July 30, 2009, regarding general issues:

COMMENTS from NASSCO dated July 30, 2009, Comment Letter A.	*REGIONAL BOARD RESPONSES*
Comment 1: **1. ANNUAL AVERAGE AND MONTHLY NUMERIC LIMITS FOR THE FLOODWATER DISCHARGES SHOULD BE REMOVED FROM THE PERMIT**[1] **a. Numeric Limits Should be Replaced with BMPs** The Draft Permit proposes Annual Average Effluent Limitations (AAELs), Average Monthly Effluent Limitations (AMELs) and Maximum Daily Effluent Limitation (MDELs) for the facility's flood dewatering discharges, which occur intermittently and infrequently during a single day following a ship launch. Between 2003 and June 2007, there were only four total discharges at the graving dock flood dewatering system (M-2), and two discharges each at the Ways 3 and Ways 4 flood dewatering systems (M-3 and M-4). Given the infrequency of these discharges, which in many cases occur only	**a. Numeric Limits Should be Replaced with BMPs** Numeric effluent limitations are appropriate for the floodwater discharges. Previous monitoring has shown the discharges to exceed some of the CTR criteria. Numeric effluent limitations have been established in the tentative Order for these parameters. These effluent limitations are needed to protect water quality and beneficial uses. NASSCO is also required to implement BMPs. **b. Even if Numeric Limits are Retained, a Per-Discharge Concentration Limit Should Replace Annual/Monthly Limits**

[1] NASSCO intends to separately submit comments regarding the Draft Permit's proposed Annual Average Effluent Limitations for the hydrostatic relief water discharges (HR-1, HR-2 and HR-3) in the near term.

[2] By contrast, maximum daily and average monthly discharge limits should be used "unless impracticable" for all "continuous" discharges other than publicly owned treatment works. 40 CFR § 122.45(d).

[3] Each of the examples are included in the text of the regulation as a hypothetical limitation on a non-continuous discharge, and are not intended to be specific limitations that would apply to NASSCO's or any other facility.

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once or twice per year (or less); the difficulty in isolating the potential sources of pollutants in these discharges; the fact that the source of the flood dewatering discharges is the San Diego Bay and the water is not treated or used in any process prior to discharge; and the difficulty in treating the discharges because, among other reasons, the high volumes and flows and the extremely low treatment levels required, NASSCO believes that numeric effluent limitations are infeasible and inappropriate. As such, NASSCO requests that the proposed numeric limits be replaced with Best Management Practices ("BMPs") designed to remove potential pollutant sources from the flood dewatering discharges. The use of BMPs as effluent limits, rather than numeric limits, is specifically authorized by the EPA's regulations and supported by the caselaw, including in situations involving CTR-based effluent limits. 40 CFR § 122.44(k)(3) (authorizing BMPs in place of numeric limits where numeric limits are infeasible); *Diver's Environmental Conservation Organization v. State Board*, 145 Cal.App.4th 246, 261-62 (2006) ("it is now clear that in implementing water quality standards, such as those set forth in the CTR, permitting agencies are not required to do so solely by way of corresponding numeric WQBEL's."). In the *Diver's* case, the Court upheld an NPDES permit that imposed BMPs as WQBELs, in place of numeric limits. *See also Communities for a Better Environment v. State Board*, 109 Cal. App. 4th 1089 (2003) (holding that water quality based effluent limitations do not need to be numeric). Given the infeasibility of applying numeric limits to the Facility's floodwater discharges, the Regional Board should exercise its discretion to impose BMPs instead. **b. Even if Numeric Limits are Retained, a Per-Discharge Concentration**	Because the flood water discharges are short term, intermittent discharges that only occur once or twice a year for about a day each time, chronic effects are not likely from the flood water discharges. The Average Monthly Effluent Limitations (AMEL) is established to protect against chronic effects of a discharge. The AMEL is not necessary since chronic effects are not likely from the flood water discharges. The AMEL for flood water discharges (M-2, 3, and 4) will be removed from the Order. The flood water discharges occur only one or two times each year. Due to this infrequent discharge, the Annual Average Effluent Limit is impractical and will be removed. Water quality will be protected by the Maximum Daily Effluent Limitation which is established at the intake water background concentration determined through the reasonable potential analysis process.

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Limit Should Replace Annual/Monthly Limits Even if the Regional Board chooses to impose numeric limits, NASSCO believes that AAELs and AMELs are inappropriate and should be replaced with a per-discharge limit on the concentration of each applicable pollutant, equivalent to the MDEL proposed in the Draft Permit. This approach would be consistent with the EPA's regulations, which provide that there is no need or preference for using average monthly and maximum daily limits for "non-continuous" discharges[2]. 40 CFR § 122.45(e). Pursuant to 40 CFR section 122.45(e), non-continuous discharges: "shall be particularly described and limited, considering the following factors, as appropriate: (1) Frequency (for example, a batch discharge shall not occur more than once every 3 weeks); (2) Total mass (for example, not to exceed 100 kilograms of zinc and 200 kilograms of chromium per batch discharge); (3) Maximum rate of discharge of pollutants during the discharge (for example, not to exceed 2 kilograms of zinc per minute); and (4) Prohibition or limitation of specified pollutants by mass, concentration, or other appropriate measure (for example, shall not contain at any time more than 0.1 mg/1 zinc or more than 250 grams (1/4 kilogram) of zinc in any discharge)."[3] 40 CFR § 122.45(e). The use of AMELs for floodwater discharges is inappropriate because of their infrequency and irregularity, as the calculations used to derive an AMEL assume rather frequent and regular discharges. The SIP equations are based on compliance monitoring frequency as well as other factors	

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(USEPA's Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991, "TSD", p. 93). For instance, the SIP equations for calculating an AMEL require specification of the number of samples per month (n); Regional Board staff have assumed n to be 4 (the SIP default value). The use of n of 4 (or even the use of n of 1) assumes effluent discharges should occur at the same frequency or more frequently than the compliance sample monitoring. It is fundamentally wrong to apply this assumption to discharges that occur much less frequently than monthly (i.e., once or twice per year at most). Annual averages are proposed in the Draft Permit to demonstrate that NASSCO is not adding any metals to background (receiving water) concentrations. "Discharges shall achieve an annual average effluent concentration that is no greater than the running annual average of the receiving water concentration. The annual average of the effluent concentrations shall be calculated once each month and compared to the average of the receiving water concentrations for the same 12-month time period." (Draft Permit, Attachment F at F-42) The use of an AAEL that is simply calculated as a running annual average of the receiving water concentrations is not appropriate for the M-discharges because: 1) This calculation can result in the ***magnitude*** of a past exceedance(s) affecting the frequency of exceedances in the future. For instance, if one large exceedance already occurred within a 12-month time period before the current period, it could result in the current period and several more periods in the future having violations even if the current and future periods have concentrations well below the limit. An example is provided in **Table 1** with hypothetical data.	

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2) The calculation of an AAEL does not account for any variability that resides within the datasets. Calculations used to derive both average monthly effluent limitations and maximum daily effluent limitations incorporate the variability of dataset (i.e., the coefficient of variation (CV)), but the proposed calculation of the running annual average does not. This is not in agreement with the TSD: "The permit limit derivation procedure used by the permitting authority…..should adequately account for effluent variability…..[and] account for compliance sampling frequency…." (TSD p. 93) 3) It is impractical to set the allowable effluent concentration (i.e., the running annual average of the receiving water concentration) as a value that is never to be exceeded; USEPA provides an additional equation for converting calculated maximum allowable effluent concentration during critical conditions (i.e., the WLA) to an LTA concentration (TSD p. 98-104). This conversion is required because it is impractical to set the allowable effluent concentration as a value that is never to be exceeded. The staff allowed this conversion in the calculation of AMELs and MDELs (Draft Permit, Attachment F at F-30) but not in the AAEL. For these reasons, NASSCO requests that the AAELs, AMELs and MDELs for discharges M-2, M-3 and M-4 be deleted from the Draft Permit, and, to the extent BMPs are not used as effluent limits, replaced with a maximum per-discharge concentration limit that is equivalent to the current MDEL. Similarly, the Interim Effluent Limits for these discharges should also be described as maximum per-discharge limits rather than maximum daily limits.	

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Comment 2. **The Draft Permit/TSO Should Clarify that Treatment is Unnecessary if Full Compliance is Achieved Through Other Means** As written, certain provisions in the Draft Permit and TSO would arguably require NASSCO to construct a treatment system for certain discharges even if NASSCO, through other means, is able to achieve full compliance with the final effluent limitations; or, for discharges for which Intake Water Credits (IWCs) have been applied, has ensured that the amount of a pollutant in its waste stream is equal to or less than the amount of the pollutant in the intake water. The SIP provides that IWCs may be granted to provide effluent limits allowing the facility to discharge a mass and concentration of the intake water pollutant that is no greater than the mass and concentration found in the facility's intake water. Under the SIP, IWCs may be applied so long as the pollutant in a waste stream is equal to or less than the amount of the pollutant in the intake water (and other conditions are met), regardless of whether or not NASSCO has implemented a treatment system to remove any pollutants in its waste stream. Accordingly, NASSCO requests the following modification to the last sentence in the third paragraph of page F-29 (proposed deletions are reflected in strikethrough and proposed additions in underline): • "NASSCO is ~~planning to install a treatment system remove copper~~ is taking steps to ensure that it does not add a mass or concentration of copper to its discharge and/or removes copper from its waste stream so that the copper in the waste streams are equal to or less than the copper in the intake water." The Draft Permit also includes a Compliance Schedule to achieve final effluent limits proposed for cadmium, copper, nickel and zinc, which is set forth in Table 12 (page 27) and Table F-26 (page F-56) of the Draft Permit. The Compliance Schedule requires, by May 18, 2010, that NASSCO complete construction and permitting of any activities needed to implement new or modified control measures necessary to achieve final compliance. To clarify that NASSCO will not be required to proceed with such construction where full compliance with final limits has been achieved through other means, NASSCO requests inclusion of the following language as a footnote to Tables 12 and F-26 in the Draft Permit:	The tentative Order and TSO will be changed to reflect that the compliance schedule is unnecessary if NASSCO achieves compliance through a means other than treatment.

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Comment 3. **Daily Flow Calculations Should be Deleted and Monthly Flow Estimates Used Instead** The Draft Permit proposes daily flow calculations for discharges HR-1, HR-2 and HR-3, and M-1 – M-4 and M-8. (Draft Permit, Tables E-2 and E-3, pages E-7 and E-8). By contrast, NASSCO's current permit requires a monthly estimate of the daily flow for each discharge. Requiring daily flow calculations would place a significant burden on NASSCO in terms of time and costs, with no apparent benefit to the Regional Board. NASSCO therefore requests that the daily flow calculation requirement be deleted from the Draft Permit and replaced with the required monthly estimate found in NASSCO's current Permit, as reflected in the requested revision to the first row of Tables E-2 and E-3 (pages E-7 and E-8) set forth below (note that the Tables below have accepted previous additions/deletions to the Tables that were reflected in the Draft Permit in underline/strikeout):	The tentative Order will be changed to allow monthly flow estimates as in the previous Order.

B. Comments submitted by Kelly E. Richardson of Latham and Watkins LLP on behalf of NASSCO, dated July 30, 2009, regarding toxicity issues:

COMMENTS from NASSCO dated July 30, 2009, Comment Letter B.	***REGIONAL BOARD RESPONSES***
Comment 1: **I. CHRONIC TOXICITY LIMITATIONS AND MONITORING REQUIREMENTS SHOULD BE DELETED** The Draft Permit has been revised to retain the numeric chronic toxicity limitations that are included in NASSCO's current permit, even though the prior version of the Draft Permit indicated that the development of such numeric limitations is currently "infeasible" because "the SIP[4] contains implementation gaps regarding the appropriate form and implementation of chronic toxicity limits" that the State Board is seeking to address through revision of the SIP. Given the Regional Board staff's prior statement that the operative SIP does not provide adequate guidance for the development and implementation of numeric chronic toxicity limitations, it is inappropriate for such limitations to be re-inserted into the Permit at this time. Accordingly, NASSCO requests deletion of chronic toxicity limitations, and monitoring requirements, until the SIP has been revised and an appropriate regulatory framework for chronic toxicity limits in NPDES Permits has been established. The "anti-backsliding" provisions in the Code of Federal Regulations do not apply to the removal of chronic toxicity limitations given the aforementioned inadequacies in the SIP. (40 CFR § 122.44(l)(2)(i)(B)(2)). We also note that two permit cycles ago, upon petition to the State Board, chronic limitations for the Facility's stormwater discharges were found to be inappropriate, and deleted from the Facility's permit, because stormwater	Chronic toxicity limitations and monitoring have been deleted for the flood water discharges (M-2, 3, and 4) because they are short term, intermittent discharges and do not have a reasonable potential to cause chronic toxicity. Chronic toxicity limitations and monitoring for the other discharges are carried forward from the previous Order because the other discharges are continuous and have a reasonable potential to cause chronic effects.

[4] The "SIP" refers to the "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California."

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discharges are intermittent. Since the Facility's floodwater discharges (M-2, M-3, and M-4) are also intermittent and infrequent, occurring only once or twice per year (or less), chronic toxicity requirements should be removed for the floodwater discharges for the same reason.	
Comment 2: To the extent that chronic toxicity limits and testing requirements are nonetheless retained in the Permit, NASSCO requests the following points of clarification. First, Section V.B.1 of Attachment E discusses a chronic toxicity monitoring program that uses two test species, while Section V.B.2 in the following paragraph discusses a program that would require three test species. The required number of test species needs to be clarified. Second, with regard to Section V.B.2's 3-species screening procedure (if it is intended to apply), the Draft Permit is unclear if NASSCO would be required to test all three species only during the first year, or if NASSCO would be required to test all three species each year.	The Regional Board staff will respond to this comment at the Regional Board meeting.
Comment 3: Third, we note that Section V.B.3.b of Attachment E provides that no dilution allowance is authorized for chronic toxicity testing, and that the chronic instream waste concentrations ("IWCs") for this discharge are 100% effluent and 62.5% effluent. The Draft Permit further provides that chronic toxicity tests will be performed at these IWCs in addition to three lower concentrations: 50, 25 and 12.5 % effluent. NASSCO requests an explanation of how these IWCs were determined and why two concentrations are included in the Permit. In addition, we request modification of the Permit so that monitoring is required only at the IWC concentration if that is the point of compliance determination. Further, we believe that an IWC of 62.5% suggests a dilution factor may be applicable at	The Regional Board staff will respond to this comment at the Regional Board meeting.

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some point; if not, testing of multiple concentrations in addition to the 100% sample should not be required.	
Comment 4: Finally, Section V.B.3.c in Attachment E states that if the use of artificial sea salts is considered provisional in the test method, then artificial sea salts should not be used to increase the salinity of the effluent sample without written approval by the permitting authority. Please clarify the meaning of "provisional" as used in this section.	The Regional Board staff will respond to this comment at the Regional Board meeting.
Comment 5: **II. THE REQUIREMENT OF A "SPLIT SAMPLE" TO TEST FOR MONITORED CHEMICALS NEEDS CLARIFICATION** The current Permit does not require NASSCO to split the effluent sample collected for toxicity tests to concurrently test for monitored chemicals. However, Section V.A.1 of Attachment E to the Draft Permit provides that during the first and fifth years of the Permit's implementation, a split of the toxicity testing effluent sample is to be "analyzed for all other monitored parameters at the minimum frequency of analysis specified by the effluent monitoring program." The Draft Permit requires annual toxicity testing for all discharge systems, but at the same time is asking NASSCO to match the frequency of analysis required for monitored chemicals, some of which have monitoring requirements that are more frequent (e.g., once per month, once per quarter). It is unclear how a split of annually collected effluent sample used to test for toxicity can be analyzed for chemicals on a schedule more frequent than once per year. The Draft Permit should be revised to clarify this language.	This sentence means that in year one and year five, a sample must be collected which is large enough to analyze for all the priority pollutants and other monitored parameters as well as conduct toxicity testing. This sample can be used to satisfy the toxicity monitoring requirements and one sample event required by other effluent monitoring requirements. Regular effluent monitoring still must be conducted at the frequency required by the monitoring and reporting program, but this split sample can satisfy one of these requirements.

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Comment 6: **III. ACUTE TOXICITY REPORTING REQUIREMENTS** Regarding Section V.A.6 of Attachment E, because acute testing is performed with a single concentration, we note that a precise LC50 cannot be determined if more than 50% mortality occurs in the single concentration. Also, if more than 50% mortality occurs, an accurate TUa value cannot be determined, as the LC50 is used to calculate the TUa value. Therefore, when more than 50% mortality occurs, it can only be accurately reported that the LC50 < 100% and the TUa > 1.0.	The requirement to report acute toxicity endpoints other than Pass/Fail such as LC50, TUa, NOAEC has been removed.
Comment 7: **IV. SPECIES FOR TOXICITY TESTING** The Draft Permit proposes changes to the types of organisms used for acute toxicity testing. Consistent with its current permit, NASSCO has been conducting annual 96-hour static-renewal tests using the invertebrate *Americamysis bahia* (formerly known as *Mysidopsis bahia*) for testing acute toxicity of its discharge waters. However, Section V.A.1 of Exhibit E to the Draft Permit provides that two species, one invertebrate and one fish, should be used in the initial toxicity test. The Draft Permit would therefore require NASSCO to institute a second toxicity test using one of the specified fish species, and states that, following an initial concurrent test using both an invertebrate and fish species, NASSCO shall choose the "most sensitive" species and continue routine testing with the most sensitive species. But the Draft Permit does not explain what is meant by the "most sensitive" species or identify how to choose between species if the outcome of toxicity tests are identical for the two species for a given discharge system. Nor does the Draft Permit clarify whether the judgment of sensitivity is to be made on a discharge-by-discharge basis, or for all discharge systems viewed	The most sensitive species will be the species that demonstrates the most toxicity for a particular discharge. If the outcome of toxicity tests are identical for the two species, the Discharger can choose which species to use. The most sensitive species determination should be made on a discharge by discharge basis.

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as a whole. (these comments also apply to the chronic toxicity monitoring requirement in Attachment E, Section V.B.1)	
Comment 8: Moreover, the Draft Permit provides that the *Americamysis bahia,* which has been used by NASSCO under the current permit, may be used only if another invertebrate species, the *Holmesimysis costata*, is not available. Please explain the basis for this change.	The invertebrate *Holmesimysis costata* has been selected as the preferred species because it is a West Coast species specific to the Pacific Coast waters.
Comment 9: **V. NEW STORMWATER MONITORING REQUIREMENTS SHOULD BE REMOVED FROM NASSCO'S PERMIT** The Draft Permit requires acute toxicity testing for two storm events per year. We believe this requirement is unnecessary because five years of toxicity testing data (from November 2002 through June 2007) demonstrates that the Facility does not have toxicity problems. Indeed, this data indicates that there have not been any failures at the Facility under the "hypothesis" test proposed for acute toxicity in the Draft Permit.	NASSCO has a storm water diversion system that is designed to collect all storm water and discharge to the sanitary sewer system. NASSCO is not required by this Order to conduct any sampling of storm water unless it is discharged to the receiving water. This is stated in a footnote to Table E-5 of the Monitoring and Reporting Program which states "Sampling shall occur during storm events, or if collected, prior to release to receiving water."