NPDES PERMIT

issued to

The Thames Shipyard and Repair Company
2 Ferry Street
New London, CT 06320

Location Address:
50 Farnsworth Street
New London, CT 06320

Permit IDs: CT0030333

Receiving Stream: Thames River

Stream Segment ID: CT-E1_015-SB

Permit Expires:

SECTION 1: GENERAL PROVISIONS

(A) This permit is reissued in accordance with section 22a-430 of Chapter 446k, Connecticut General Statutes ("CGS"), and Regulations of Connecticut State Agencies ("RCSA") adopted thereunder, as amended, and section 402(b) of the Clean Water Act, as amended, 33 USC 1251, et. seq., and pursuant to an approval dated September 26, 1973, by the Administrator of the United States Environmental Protection Agency for the State of Connecticut to administer an N.P.D.E.S. permit program.

(B) The Thames Shipyard and Repair Company, ("Permittee"), shall comply with all conditions of this permit including the following sections of the RCSA which have been adopted pursuant to section 22a-430 of the CGS and are hereby incorporated into this permit. Your attention is especially drawn to the notification requirements of subsection (i)(2), (i)(3), (j)(1), (j)(6), (j)(8), (j)(9)(C), (j)(10)(C), (j)(11)(C), (D), (E), and (F), (k)(3) and (4) and (l)(2) of section 22a-430-3.

Section 22a-430-3 General Conditions

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(d) Effect of a Permit
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(C) Violations of any of the terms, conditions, or limitations contained in this permit may subject the Permittee to enforcement action including, but not limited to, seeking penalties, injunctions and/or forfeitures pursuant to applicable sections of the CGS and RCSA.

(D) Any false statement in any information submitted pursuant to this permit may be punishable as a criminal offense under section 22a-438 or 22a-131a of the CGS or in accordance with section 22a-6, under section 53a-157b of the CGS.

(E) The authorization to discharge under this permit may not be transferred without prior written approval of the Commissioner of Energy and Environmental Protection ("Commissioner"). To request such approval, the Permittee and proposed transferee shall register such proposed transfer with the Commissioner, at least 30 days prior to the transferee becoming legally responsible for creating or maintaining any discharge which is the subject of the permit transfer. Failure, by the transferee, to obtain the Commissioner's approval prior to commencing such discharge(s) may subject the transferee to enforcement action for discharging without a permit pursuant to applicable sections of the CGS and RCSA.

(F) No provision of this permit and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by the Permittee pursuant to this permit will result in compliance or prevent or abate pollution.

(G) Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.

(H) An annual fee shall be paid for each year this permit is in effect as set forth in section 22a-430-7 of the Regulations of Connecticut State Agencies.

(I) This permitted discharge is consistent with the applicable goals and policies of the Connecticut Coastal Management Act (section 22a-92 of the Connecticut General Statutes).

SECTION 2: DEFINITIONS

(A) The definitions of the terms used in this permit shall be the same as the definitions contained in section 22a-423 of the CGS and section 22a-430-3(a) and 22a-430-6 of the RCSA, except for "No Observable Acute Effect Level (NOAEL)" which is redefined below.

(B) In addition to the above, the following definitions shall apply to this permit:

"-----" in the limits column on the monitoring table means a limit is not specified but a value must be reported on the DMR.

"Average Monthly Limit"; means the maximum allowable "Average Monthly Concentration" as defined in section 22a-430-3(a) of the RCSA when expressed as a concentration (e.g. mg/l); otherwise, it means "Average Monthly Discharge Limitation" as defined in section 22a-430-3(a) of the RCSA.

"Critical Test Concentration (CTC)" means the specified effluent dilution at which the Permittee is to conduct a single-concentration Aquatic Toxicity test.

"Daily Concentration" means the concentration of a substance as measured in a daily composite sample, or the arithmetic average of all grab sample results defining a grab sample average.

"Daily Quantity" means the quantity of waste discharged during an operating day.

"Instantaneous Limit" means the highest allowable concentration of a substance as measured by a grab sample, or the highest allowable measurement of a parameter as obtained through instantaneous monitoring.

"In stream Waste Concentration (IWC)" means the concentration of a discharge in the receiving water after mixing has occurred in the allocated zone of influence.

"Maximum Daily Limit", means the maximum allowable "Daily Concentration" (defined above) when expressed as a concentration (e.g. mg/l); otherwise, it means the maximum allowable "Daily Quantity" as defined above, unless it is expressed as a flow quantity. If expressed as a flow quantity it means “Maximum Daily Flow” as defined in section 22a-430-3(a) of the RCSA.

"NA" as a Monitoring Table abbreviation means “not applicable”.

"NR" as a Monitoring Table abbreviation means “not required”.

"Quarterly", in the context of a sampling frequency, means that a representative sample of the discharge shall be collected at any time during each of the following periods: January-March; April-June, July-September, and October-December. Analytical results shall be reported in the March, June, September, and December DMRs.

"Range During Month" ("RDM"), as a sample type, means the lowest and the highest values of all of the monitoring data for the reporting month.

"Range During Sampling" ("RDS"), as a sample type, means the maximum and minimum of all values recorded as a result of analyzing each grab sample of; 1) a Composite Sample, or, 2) a Grab Sample Average. For those Permittees with continuous monitoring and recording pH meters, Range During Sampling means the maximum and minimum readings recorded with the continuous monitoring device during the Composite or Grab Sample Average sample collection.

"Semi-Annual" in the context of a sampling frequency, means that a representative sample of the discharge shall be collected at any time during each of the following periods: January-June and July-December. Analytical results shall be reported in the June and December DMRs.

"µg/l" means micrograms per liter.

SECTION 3: COMMISSIONER'S DECISION

(A) The Commissioner, has issued a final determination and found that such discharge will not cause pollution of the waters of the state. The Commissioner's decision is based on Application No. 201402935 for permit reissuance received on April 1, 2014 and the administrative record established in the processing of that application.

(B) (1) From the issuance of this permit through and including the last day of the first calendar month of such issuance, the Commissioner hereby authorizes the Permittee to discharge in accordance with the terms and conditions of Permit No. CT0030333, issued by the Commissioner to the Permittee on September 29, 2009, the previous application submitted by the Permittee on November 28, 2000, and all modifications and approvals issued by the Commissioner or the Commissioner's authorized agent for the discharge and/or activities authorized by, or associated with, Permit No. CT0030333, issued by the Commissioner to the Permittee on September 29, 2009.

(2) Beginning on the first day of the month following the issuance of this permit and continuing until this permit expires or is modified or revoked, the Commissioner hereby authorizes the Permittee to discharge in accordance with the terms and conditions of this permit, Application No. 201402935 received by the Department on April 1, 2014, and all modifications and approvals issued by the Commissioner or the Commissioner's authorized agent for the discharge and/or activities authorized by, or associated with this permit.

(C) The Commissioner reserves the right to make appropriate revisions to the permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the Federal Clean Water Act or the CGS or regulations adopted thereunder, as amended. The permit as modified or renewed under this paragraph may also contain any other requirements of the Federal Clean Water Act or CGS or regulations adopted thereunder which are then applicable.

SECTION 4: GENERAL EFFLUENT LIMITATIONS

(A) No discharge shall contain, or cause in the receiving stream, a visible oil sheen or floating solids; or, cause visible discoloration or foaming in the receiving stream.

(B) No discharge shall cause acute or chronic toxicity in the receiving water body beyond any zone of influence specifically allocated to that discharge in this permit.

(C) The temperature of any discharge shall not increase the temperature of the receiving stream above 83ºF, or, in any case, raise the temperature of the receiving stream by more than 4ºF. The incremental temperature increase in coastal and marine waters is limited to 1.5ºF during the period including July, August and September.

SECTION 5: SPECIFIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

(A) The discharges shall not exceed and shall otherwise conform to the specific terms and conditions listed below. The discharges are restricted by, and shall be monitored in accordance with, the tables below:

TABLE A

Discharge Serial Number: 101-1	**Monitoring Location:** 1
Wastewater Description: Pumped water from the 20 ballast tanks at the large dry dock	
Monitoring Location Description: At the discharge of the ballast water pumps	
Allocated Zone of Influence (ZOI) for analysis based on acute criteria: 11,245,370 gph	**In stream waste concentration (IWC - 1 hour):** 18.2 %
Allocated Zone of Influence (ZOI) for analysis based on chronic criteria: 20,241,666 gph	**In stream waste concentration (IWC - 24 hours):** 1.0 %

PARAMETER	**UNITS**	**FLOW/TIME BASED MONITORING**				**INSTANTANEOUS MONITORING**			**Minimum Level Test [8]**
		Average Monthly Limit	Maximum Daily Limit	Sample/ Reporting Frequency[2]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/ Reporting Frequency [2]	Sample Type or measurement to be reported	
LC_{50} Static 48Hr Acute Mysid. Bahia[3,9]	%	NA	LC_{50} =100%	Semi-Annually[7]	Composite[4]	---	NR	Grab	
LC_{50} Static 48Hr Acute Menidia[3,9]	%	NA	LC_{50} =100%	Semi-Annually[7]	Composite[4]	---	NR	Grab	
Copper, Total[3]	mg/l	---	---	Quarterly[6]	Composite[4]	---	NR	Grab	See Footnote 8
Flow, Maximum During 24 hr Period[1]	MGD	NA	5.0	Quarterly[6]	Daily Flow	NA	NR	NA	
Iron, Total[3]	mg/l	NA	----	Quarterly[6]	Composite[4]	NA	NR	Grab	
pH (Day of Sampling)	S.U.	NA	NA	NR	NA	6.0 – 9.0	Quarterly[6]	Grab	
Sulfates[3]	mg/l	NA	---	Quarterly[6]	Composite[4]	NA	NR	Grab	
Total Suspended Solids[3]	mg/l	NA	---	Quarterly[6]	Composite[4]	NA	NR	Grab	
Visible Foam[5]	Yes/ No	NA	---	Quarterly[6]	See Footnote 5	NA	NR	NA	
Zinc, Total[3]	mg/l	---	---	Quarterly[6]	Composite[4]	NA	NR	Grab	See Footnote 8

Table A Footnotes and Remark:

Footnotes:

[1] For this parameter, the Permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report the Maximum Daily Flow for each quarterly period.

[2] The first entry in this column is the 'Sample Frequency'. If a 'Reporting Frequency' does not follow this entry and the 'Sample Frequency' is more frequent than monthly then the 'Reporting Frequency' is monthly. If the 'Sample frequency' is specified as monthly, or less frequent, then the 'Reporting Frequency' is the same as the 'Sample Frequency'.

[3] All analysis shall be on the same sample.

[4] "Composite sample" shall consist of grab samples collected from six pumps (3 from each side of the dry dock) and combined into one sample. A single grab sample shall be collected and tested for pH.

[5] For this parameter, the Permittee shall record and report the presence of persistent foaming existing for more than 30 minutes in the ZOI and when the foam depth exceeds two (2) inches.

[6] "Quarterly" means that a representative sample of the discharge shall be collected at any time during each of the following periods: January-March; April-June, July-September, and October-December. Analytical results shall be reported in the March, June, September, and December DMRs (minimum of four samples per year).

[7] "Semi-Annually" means that a representative sample of the discharge shall be collected at any time during each of the following periods: January-June and July-December. Analytical results shall be reported in the June and December DMRs.

[8] Minimum Level Test refers to Section 6(A)(3) of this permit.

[9] Record the LC_{50} value result on the DMR.

TABLE B

Discharge Serial Number: 102-1	**Monitoring Location:** 1
Wastewater Description: Pumped water from the 15 ballast tanks at the small dry dock	
Monitoring Location Description: At the discharge of the ballast water pumps	
Allocated Zone of Influence (ZOI) for analysis based on acute criteria: 8,996,296 gph	**In stream waste concentration (IWC - 1 hour):** 18.2 %
Allocated Zone of Influence (ZOI) for analysis based on chronic criteria: 8,096,634 gph	**In stream waste concentration (IWC - 24 hours):** 1.0 %

PARAMETER	**UNITS**	**FLOW/TIME BASED MONITORING**				**INSTANTANEOUS MONITORING**			**Minimum Level Test [8]**
		Average Monthly Limit	Maximum Daily Limit	Sample/ Reporting Frequency[2]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/ Reporting Frequency [2]	Sample Type or measurement to be reported	
LC_{50} Static 48Hr Acute Mysid. Bahia[3,9]	%	NA	$LC_{50} \geq 100\%$	Semi-Annually[7]	Composite[4]	$LC_{50} > 33\%$	NR	Grab	
LC_{50} Static 48Hr Acute Menidia[3,9]	%	NA	$LC_{50} \geq 100\%$	Semi-Annually[7]	Composite[4]	$LC_{50} > 33\%$	NR	Grab	
Copper, Total[3]	mg/l	---	---	Quarterly[6]	Composite[4]	NA	NR	Grab	See Footnote 8
Flow, Maximum During 24 hr Period[1]	MGD	NA	2.0	Quarterly[6]	Daily Flow	NA	NR	NA	
Iron, Total[3]	mg/l	NA	-----	Quarterly[6]	Composite[4]	NA	NR	Grab	
pH, Day of Sampling	S.U.	NA	NA	NR	NA	6.0 – 9.0	Quarterly[6]	Grab	
Sulfates[3]	mg/l	NA	----	Quarterly[6]	Composite[4]	NA	NR	Grab	
Total Suspended Solids[3]	mg/l	NA	----	Quarterly[6]	Composite[4]	NA	NR	Grab	
Visible Foam[5]	Yes/ No	NA	----	Quarterly[6]	See Footnote 5	NA	NR	NA	
Zinc, Total [3]	mg/l	---	---	Quarterly[6]	Composite[4]	NA	NR	Grab	See Footnote 8

Table B Footnotes and Remark :

Footnotes:

[1] For this parameter, the Permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report the Maximum Daily Flow for each quarterly period.

[2] The first entry in this column is the 'Sample Frequency'. If a 'Reporting Frequency' does not follow this entry and the 'Sample Frequency' is more frequent than monthly then the 'Reporting Frequency' is monthly. If the 'Sample frequency' is specified as monthly, or less frequent, then the 'Reporting Frequency' is the same as the 'Sample Frequency'.

[3] All analysis shall be on the same sample.

[4] "Composite sample" shall consist of grab samples collected from six pumps (3 from each side of the dry dock) and combined into one sample. A single grab sample shall be collected and tested for pH.

[5] For this parameter, the Permittee shall record and report the presence of persistent foaming existing for more than 30 minutes in the ZOI and when the foam depth exceeds two (2) inches.

[6] "Quarterly" means that a representative sample of the discharge shall be collected at any time during each of the following periods: January-March; April-June, July-September, and October-December. Analytical results shall be reported in the March, June, September, and December DMRs (minimum of four samples per year).

[7] "Semi-Annually" means that a representative sample of the discharge shall be collected at any time during each of the following periods: January-June and July-December. Analytical results shall be reported in the June and December DMRs.

[8] Minimum Level Test refers to Section 6(A)(3) of this permit.

[9] Record the LC_{50} value result on the DMR.

(1) All samples shall be comprised of only the wastewater described in this table. Samples shall be collected prior to combination with receiving waters or wastewater of any other type, and after all approved treatment units, if applicable. All samples collected shall be representative of the discharge during standard operating conditions.

(2) In cases where limits and sample type are specified but sampling is not required by this permit, the limits specified shall apply to all samples which may be collected and analyzed by the Department of Energy and Environmental Protection personnel, the Permittee, or other parties.

SECTION 6: SAMPLE COLLECTION, HANDLING AND ANALYTICAL TECHNIQUES

(A) Chemical Analysis

(1) Chemical analyses to determine compliance with effluent limits and conditions established in this permit shall be performed using the sufficiently sensitive methods approved by the Environmental Protection Agency pursuant to 40 CFR 136 unless an alternative method has been approved in writing in accordance with 40 CFR 136.4 or as provided in section 22a-430-3(j)(7) of the RCSA. Chemicals which do not have methods of analysis defined in 40 CFR 136 shall be analyzed in accordance with methods specified in this permit.

(2) All metals analyses identified in this permit shall refer to analyses for Total Recoverable Metal as defined in 40 CFR 136 unless otherwise specified.

(3) The Minimum Levels specified below represent the concentrations at which quantification must be achieved and verified during the chemical analyses for the parameters identified in Section 5 Tables A and B. Analyses for these parameters must include check standards within ten percent of the specified Minimum Level or calibration points equal to or less than the specified Minimum Level.

Parameter	Minimum Level
Copper	5.0 µg/L
Zinc	10.0 µg/L

(4) The value of each parameter for which monitoring is required under this permit shall be reported to the maximum level of accuracy and precision possible consistent with the requirements of this section of the permit.

(5) Effluent analyses for which quantification was verified during the analysis at or below the minimum levels specified in this section and which indicate that a parameter was not detected shall be reported as "less than x" where 'x' is the numerical value equivalent to the analytical method detection limit for that analysis.

(6) Results of effluent analyses which indicate that a parameter was not present at a concentration greater than or equal to the Minimum Level specified for that analysis shall be considered equivalent to zero (0.0) for purposes of determining compliance with effluent limitations or conditions specified in this permit.

B) Acute Aquatic Toxicity Test

(1) Samples for monitoring of Aquatic Toxicity shall be collected and handled as prescribed in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (EPA/821-R-02-012).

(a) Composite samples shall be chilled as they are collected. Grab samples shall be chilled immediately following collection. Samples shall be held at 4 degrees Centigrade until Aquatic Toxicity testing is initiated.

(b) Effluent samples shall not be dechlorinated, filtered, or, modified in any way, except for salinity adjustment, prior to testing for Aquatic Toxicity unless specifically approved in writing by the Commissioner for monitoring at this facility.

(c) Chemical analyses of the parameters identified in Section 5 Tables A and B shall be conducted on an aliquot of the same sample tested for Aquatic Toxicity.

(i) At a minimum, pH, specific conductance, salinity, total alkalinity, total hardness, and total residual oxidants shall be measured in the effluent sample and, during Aquatic Toxicity tests, in the highest concentration of test solution and in the dilution (control) water at the beginning of the test and at test termination. If Total Residual oxidant is not detected at test initiation, it does not need to be measured at test termination. Dissolved oxygen, pH, and temperature shall be measured in the control and all test concentrations at the beginning of the test, daily thereafter, and at test termination. Salinity shall be measured in each test concentration at the beginning of the test and at test termination.

(ii) For tests with saltwater organisms that require salinity adjustment of the effluent, chemical analyses shall be conducted on an aliquot of the effluent sample collected for Aquatic Toxicity testing and on an aliquot of the effluent following salinity adjustment. Both sets of results shall be reported on the Aquatic Toxicity Monitoring Report (ATMR).

(d) Tests for Aquatic Toxicity shall be initiated within 36 hours of sample collection

(2) Monitoring for Aquatic Toxicity to determine compliance with the permit limit on Aquatic Toxicity (invertebrate) above shall be conducted for 48-hours utilizing neonatal Mysidopsis bahia (1-5 days old with no more than 24-hours range in age)

(3) Monitoring for Aquatic Toxicity to determine compliance with the permit limit on Aquatic Toxicity (vertebrate) above shall be conducted for 48-hours utilizing larval Menidia beryllina (9-14 days old with no more than 24-hours range in age).

(4) Tests for Aquatic Toxicity shall be conducted as prescribed for static non-renewal acute tests in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (EPA/821-R-02-012), except as specified below.

(a) Definitive (multi-concentration) testing, with LC50 as the endpoint, shall be conducted to determine compliance with limits on Aquatic Toxicity and monitoring conditions and shall incorporate, at a minimum, the following effluent concentrations:

(i) For Aquatic Toxicity Limits expressed as LC50 values of 33% or greater: 100%, 75%, 50%, 25%, 12.5%, and 6.25%

(ii) For Aquatic Toxicity Limits expressed as LC50 values between 15% and 33% and for monitoring only conditions: 100%, 50%, 25%, 12.5%, and 6.25%

(iii) For Aquatic Toxicity Limits expressed as LC50 values of 15% or less: 100%, 50%, 25%, 12.5%, 6.25%, and 3%

(b) Mysidopsis bahia shall be fed during the tests.

(ii) Copper nitrate shall be used as the reference toxicant in tests with freshwater organisms.

(c) Aquatic toxicity tests with saltwater organisms shall be conducted at a salinity of 25 parts per thousand, plus or minus 2 parts per thousand.

(i) Sodium lauryl sulfate or sodium dodecyl sulfate shall be used as the reference toxicant.

(ii) Synthetic seawater for use as dilution water or controls shall be prepared with deionized water and artificial sea salts as described in EPA/821-R-02-012.

(iii) If the salinity of the source water is more that 5 parts per thousand higher, or lower than the culture water used for rearing the organisms, a second set of controls matching the salinity of the culture water shall be added to the test series. Test validity shall be determined using the controls adjusted to match the source water salinity.

(iv) Salinity adjustment that may be required in tests with saltwater organisms shall utilize the minimum amount of synthetic hypersaline brine (not to exceed 100 parts per thousand) or dilute (2 parts per thousand) synthetic seawater necessary to achieve the required salinity.

(v) The actual effluent concentrations in definitive tests with saltwater organisms shall be used in calculating test results.

(5) Compliance with limits on Aquatic Toxicity shall be determined as follows:

(a) For limits expressed as a minimum LC50 value, compliance shall be demonstrated when the results of a valid definitive Aquatic Toxicity test indicates that the LC50 value for the test is greater than the Aquatic Toxicity Limit.

SECTION 7: REPORTING REQUIREMENTS

(A) The results of chemical analyses and any aquatic toxicity test required above shall be entered on the Discharge Monitoring Report (DMR), provided by this office, and reported to the Bureau of Materials Management and Compliance Assurance (Attn: DMR Processing) at the following address. Except for continuous monitoring, any monitoring required more frequently than monthly shall be reported on an attachment to the DMR, and any additional monitoring conducted in accordance with 40 CFR 136 or other methods approved by the Commissioner shall also be included on the DMR, or as an attachment, if necessary. The report shall also include a detailed explanation of any violations of the limitations specified. The DMR shall be received at this address by the last day of the month following the month in which samples are collected.

Bureau of Materials Management and Compliance Assurance
Water Permitting and Enforcement Division (Attn: DMR Processing)
Connecticut Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

(B) Complete and accurate aquatic toxicity test data, including percent survival of test organisms in each replicate test chamber, LC50 values and 95% confidence intervals for definitive test protocols, and all supporting chemical/physical measurements performed in association with any aquatic toxicity test, including measured daily flow and hours of operation for the day of sample collection, shall be entered on the Aquatic Toxicity Monitoring Report form (ATMR) and sent to the Bureau of Water Protection and Land Reuse at the following address. The ATMR shall be received at this address by the last day of the month following the month in which samples are collected.

Bureau of Water Protection and Land Reuse (Attn: Aquatic Toxicity)
Connecticut Department of Energy and Environmental Protection
79 Elm St.
Hartford, CT 06106-5127

(C) If this permit requires monitoring of a discharge on a calendar basis (e.g. Monthly, quarterly, etc.), but a discharge has not occurred within the frequency of sampling specified in the permit, the Permittee must submit the DMR and ATMR, as scheduled, indicating "NO DISCHARGE". For those Permittees whose

required monitoring is discharge dependent (e.g. per batch), the minimum reporting frequency is monthly. Therefore, if there is no discharge during a calendar month for a batch discharge, a DMR must be submitted indicating such by the end of the following month.

(D) NetDMR Reporting Requirements

(1) Prior to one-hundred and eighty (180) days after the issuance of this permit, the Permittee may either submit monitoring data and other reports to the Department in hard copy form or electronically using NetDMR, a web-based tool that allows Permittees to electronically submit discharge monitoring reports (DMRs) and other required reports through a secure internet connection. Unless otherwise approved in writing by the Commissioner, no later than one-hundred and eighty (180) days after the issuance of this permit the Permittee shall begin reporting electronically using NetDMR. Specific requirements regarding subscription to NetDMR and submittal of data and reports in hard copy form and for submittal using NetDMR are described below:

(a) Submittal of *NetDMR Subscriber Agreement*

On or before fifteen (15) days after the issuance of this permit, the Permittee and/or the person authorized to sign the Permittee's discharge monitoring reports ("Signatory Authority") as described in RCSA Section 22a-430-3(b)(2) shall contact the Department at deep.netdmr@ct.gov and initiate the NetDMR subscription process for electronic submission of Discharge Monitoring Report (DMR) information. Information on NetDMR is available on the Department's website at www.ct.gov/deep/netdmr. On or before ninety (90) days after issuance of this permit the Permittee shall submit a signed copy of the ***Connecticut DEEP NetDMR Subscriber Agreement*** to the Department.

(b) Submittal of Reports Using NetDMR

Unless otherwise approved by the Commissioner, on or before one-hundred and eighty (180) days after issuance of this permit, the Permittee and/or the Signatory Authority shall electronically submit DMRs and reports required under this permit to the Department using NetDMR in satisfaction of the DMR submission requirement in paragraph (A) of this Section of this permit.

DMRs shall be submitted electronically to the Department no later than the 30th day of the month following the completed reporting period. All reports required under the permit, including any monitoring conducted more frequently than monthly or any additional monitoring conducted in accordance with 40 CFR 136, shall be submitted to the Department as an electronic attachment to the DMR in NetDMR. Once a Permittee begins submitting reports using NetDMR, it will no longer be required to submit hard copies of DMRs or other reports to the Department. Permittee shall also electronically file any written report of non-compliance described in paragraph (A) of this Section and in the following Section of this Permit as an attachment in NetDMR. NetDMR is accessed from: http://www.epa.gov/netdmr.

(c) Submittal of NetDMR Opt-Out Requests

If the Permittee is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for electronically submitting DMRs and reports, the Commissioner may approve the submission of DMRs and other required reports in hard copy form ("opt-out request"). Opt-out requests shall be submitted in writing to the Department for written approval on or before fifteen (15) days prior to the date a Permittee would be required under this permit to begin filing DMRs and other reports using NetDMR. This demonstration shall be valid for twelve (12) months from the date of the Department's approval and shall thereupon expire. At such time, DMRs and reports shall be submitted electronically to the Department using NetDMR unless the Permittee submits a renewed opt-out request and such request is approved by the Department.

All opt-out requests and requests for the NetDMR subscriber form should be sent to the following address or by email at deep.netdmr@ct.gov:

Attn: NetDMR Coordinator
Connecticut Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

SECTION 8: RECORDING AND REPORTING OF VIOLATIONS, ADDITIONAL TESTING REQUIREMENTS

(A) If any sample analysis indicates that an Aquatic Toxicity effluent limitation in Section 5 of this permit has been exceeded, or that the test was invalid, another sample of the effluent shall be collected and tested for Aquatic Toxicity and associated chemical parameters, as described above in Section 5 and Section 6, and the results reported to the Bureau of Materials Management and Compliance Assurance (Attn: DMR Processing), at the address listed above, within 30 days of the exceedance or invalid test. Results of all tests, whether valid or invalid, shall be reported.

(B) If any two consecutive test results or any three test results in a twelve month period indicates that an Aquatic Toxicity Limit has been exceeded, the Permittee shall immediately take all reasonable steps to eliminate toxicity wherever possible and shall submit a report to Bureau of Materials Management and Compliance Assurance (Attn: Aquatic Toxicity) for the review and approval of the Commissioner in accordance with section 22a-430-3(j)(10)(c) of the RCSA describing proposed steps to eliminate the toxic impact of the discharge on the receiving water body. Such a report shall include a proposed time schedule to accomplish toxicity reduction and the Permittee shall comply with any schedule approved by the Commissioner.

(C) The Permittee shall notify the Bureau of Materials Management and Compliance Assurance, Water Permitting and Enforcement Division, within 72 hours and in writing within thirty days of the discharge of any substance listed in the application but not listed in the permit if the concentration or quantity of that substance exceeds two times the level listed in the application.

This permit is hereby issued on

_____
Robert E. Kaliszewski
Deputy Commissioner
Department of Energy and Environmental Protection

RK/OF

WASTEWATER DISCHARGE PERMIT: DATA TRACKING AND TECHNICAL FACT SHEET

Permittee: The Thames Shipyard & Repair Company

PERMIT, ADDRESS, AND FACILITY DATA

PERMIT #: CT0030333 *APPLICATION #: 201402935*

Mailing Address:						*Location Address:*					
Street:	*2 Ferry Street*					*Street:*	*50 Farnsworth Street*				
City:	*New London*	*ST:*	*CT*	*Zip:*	*06320*	*City:*	*New London*	*ST:*	*CT*	*Zip:*	*06320*
Contact Name:	*Adam Wronowski*					*DMR Contact*	*Adam Wronowski*				
Phone No.:	*(860) 442-5349*					*Phone No.:*	*(860) 442-5349*				
Contact E-mail:	*adam@longislandferry.com*					*DMR Contact E-mail:*	*adam@longislandferry.com*				

PERMIT INFORMATION

DURATION *5 YEAR X* *10 YEAR ___* *30 YEAR*

TYPE *New ___* *Reissuance X* *Modification __*

CATEGORIZATION *POINT (X)* *NON-POINT ( )* *GIS # ———*

NPDES (X) *PRETREAT ()* *GROUND WATER (UIC) ( )* *GROUND WATER (OTHER) ( )*

NPDES MAJOR (MA) ___
NPDES SIGNIFICANT MINOR or PRETREAT SIU (SI) ___
NPDES or PRETREATMENT MINOR (MI) X

PRETREAT SIGNIFICANT INDUS USER (SIU) ___
PRETREAT CATEGORICAL (CIU) ___
POLLUTION PREVENTION MANDATE ___ *ENVIRONMENTAL EQUITY ISSUE ___*

SIC CODE: 3731 (Ship Building and Repairing)

COMPLIANCE ISSUES

COMPLIANCE SCHEDULE *YES ___* *NO X*

POLLUTION PREVENTION ___ *TREATMENT REQUIREMENT __* *WATER CONSERVATION ___*

WATER QUALITY REQUIREMENT __ *REMEDIATION ___* *OTHER ___*

IS THE PERMITTEE SUBJECT TO A PENDING ENFORCEMENT ACTION? NO X *YES __*

OWNERSHIP CODE

Private X *Federal __* *State __* *Municipal (town only) ___* *Other public __*

DEEP STAFF ENGINEER: *Oluwatoyin Fakilede*

PERMIT FEES

Discharge Code	*DSN Number*	*Annual Fee*
*101057R**	*DSNs 101and 102*	*$ 5,644.75*

** Reduction – A 33% reduction was applied because the annual fee amount for shipbuilding is excessive in relation to the cost of the permitted activity in accordance with RCSA Section 22a-430-7(g)(Schedule B).*

FOR NPDES DISCHARGES

Drainage basin Code: 3000 *Water Quality Standard: SB*

NATURE OF BUSINESS GENERATING DISCHARGE

The Thames Shipyard & Repair Company provides repair, construction and refurbishing services for various marine vessels, including passenger and car ferries, commercial workboats, fishing vessels, and other watercraft. To conduct some of the shipbuilding activities, it is necessary to remove the vessel from the water. This is accomplished with a "floating dry dock" which is a vessel that can be raised and lowered in the water by controlled flooding of the dry dock ballast tanks. Thames River water is used as "ballast" to adjust the depth of the dry dock in the water. This is achieved by letting river water into or pumping river water out of the ballast tanks of the dry docks. Currently, the water is returned to the river without treatment.

The following wastewaters are generated at the site but are permitted under other permitting options:

- *Stormwater from the site is permitted under Stormwater Industrial Activities General Permit No. GSI001418.*
- *Pressure wash water is permitted under Miscellaneous Sewer Discharges General Permit No. CTMIU0044.*

PROCESS AND TREATMENT DESCRIPTION (by DSN)

DSN 101-1: This discharge is comprised of 5.0 MGD of ballast tanks wastewaters. There is no treatment required for this discharge.

DSN 102-1: This discharge is comprised of 2.0 MGD of ballast tanks wastewaters. There is no treatment required for this discharge.

RESOURCES USED TO DRAFT PERMIT

__ *Federal Effluent Limitation Guideline*

__ *Performance Standards*

__ *Federal Development Document*

__ *Treatability Manual*

X *Department File Information*

X *Connecticut Water Quality Standards*

X *Anti-degradation Policy*

X *Coastal Management Consistency Review Form*
The Applicant filed the appropriate CMCR form and demonstrated consistency with applicable statutory goals and policies.

X *Other – Explain (See General Comments)*

BASIS FOR LIMITATIONS, STANDARDS, OR CONDITIONS

X *Case-by-Case Determination and Best Professional Judgment (See Other Comments)*
DSN 101-1: Aquatic toxicity (MDL) and pH (MIL)
DSN 102-1: Aquatic toxicity (MDL) and pH (MIL)

MDL: - Maximum Daily Limit *MIL: - Maximum Instantaneous Limit*

GENERAL COMMENTS

The Thames Shipyard & Repair Company (Thames Shipyard) previously discharged from fifteen (15) ballast tanks at the small dry dock. In Application No. 201402935 submitted on April 1, 2014, Thames Shipyard proposed to discharge from twenty-four (24) ballast tanks at the small dry dock (DSN 102) and increase the previously permitted discharge flow at DSN 102 from 0.9 MGD to 2.0 MGD. On the other hand, Thames Shipyard proposed to reduce the previously permitted discharge flow at DSN 101 from 6.7 MGD to 5.0 MGD. Since the discharges at DSN 101 and DSN 102 rarely occur simultaneously, the maximum permitted discharge flows at DSNs 101 and 102 will be mostly 5.0 MGD. The discharge flow could be 7.0 MGD maybe once in a year.

The need for inclusion of water quality based discharge limitations in this permit was evaluated consistent with Connecticut Water Quality Standards and criteria, pursuant to 40 CFR 122.44(d). Each parameter was evaluated for consistency with the available aquatic life criteria (acute and chronic) and human health (fish consumption only) criteria, considering the zone of influence allocated to the facility where appropriate. The reasonable potential statistical procedures outlined in the EPA Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001) were employed to calculate the need for such limits. The calculated limits were then compared to the available effluent data. A comparison of the calculated limits to the effluent data suggests a statistical probability of exceeding such limits for copper and zinc at the large dock and for only copper at the small dock (see Appendix A). However, on January 21, 2016 and August 21, 2016, the Permittee submitted analytical data to support the claim that there is no significant difference between the copper and zinc concentrations in its influent and effluent. Pursuant to 22a-430-4(l)(4)(A)(x)(1) of the Regulations of Connecticut State Agencies, the Department performed an analysis to evaluate whether the use of the water at the facility caused or contributed to any unacceptable increase in copper and zinc concentrations in the effluent as compared to those present in the influent. There was a finding that there is essentially no "net" increase of copper and zinc concentrations in the effluent as a result of water use at the facility. This demonstrates that the discharge is consistent with the Connecticut Water Quality Standards and is unlikely to cause or contribute to any potential increases in copper and zinc concentrations within Thames River (see Appendix B). Therefore, no limit was included for copper and zinc in this permit.

OTHER COMMENTS

The NPDES permit issued on September 28, 2009 was modified on October 7, 2013 based on the following reason: Section 9 of the previous permit required the Permittee to conduct a study and submit for the Commissioner's review and approval, an engineering report that summarizes effluent data for total suspended solids (TSS), 5-day biochemical oxygen demand (BOD_5), copper and silver for DSN 101 and DSN 102 over eight quarters after the permit issuance. The report was to include a discussion of the comparability of the intake water and effluent data discharge analytical results for TSS, BOD_5, copper and silver and a recommendation of whether effluent limitations for these parameters are necessary for protection of the waters of the state. At the time of the permit issuance, the Permittee was of the opinion that future wastewater discharge testing would demonstrate that its operations were not changing the background river water quality. Upon verification of this point, the Permittee intended to request the permit to be modified to reduce the frequency of monitoring. On November 29, 2011, the Permittee submitted the required report.

A review of historical effluent data provided by the Permittee for both the large (DSN 101) and small (DSN 102) dry dock in the above referenced engineering report revealed that the discharges were consistently non-toxic and the potential for

the discharges to cause acute or chronic toxicity in the receiving waters was minimal. A review of discharge monitoring reports submitted by the Permittee in 2012 and 2013 also confirmed the above finding. Therefore, the permit was modified to reduce the frequency of monitoring for aquatic toxicity from monthly (February – June) to semi-annually and frequency of monitoring for copper, daily discharge flow, iron, pH, sulfates, total suspended solids, visible foam and zinc from monthly (February – June) to quarterly. The permit modification also removed monitoring requirements for BOD_5, total oil and grease, total residual oxidants, nitrogen nitrate, and total silver, since a review of historical effluent data provided by the Permittee revealed that these parameters have been consistently below detection in the wastewaters.

The findings during the permit modification processing hold true today because recent DMRs continue to support the findings. DMRs also show that the Permittee has been compliant with its permit. Therefore, the monitoring frequencies and requirements in the modified permit issued on October 7, 2013 were carried forward in this permit. In accordance with section 22a-430-3(j)(4) of Regulations of Connecticut State Agencies (RCSA) and based on Best Professional Judgment, DEEP staff did not use the minimum Monitoring Schedule in RCSA 22a-430-3 because Thames Shipyard only discharges for about one hour, less than eight times a month.

The previously allocated Zone of Influence (ZOI) of 20,241,666 gallons per hour was carried forward. The ZOI was based on a dye study conducted by a facility with a similar discharge to the Thames River. The ZOI was prorated between the large and small docks discharges for analysis based on acute criteria. This is because both discharges could occur at the same time on rare occasions. Although this permit does not propose an increase in ZOI and the proposed discharge is lower than the previously permitted discharge most of the time, an anti-degradation analysis was conducted because of the change in the in-stream waste concentration. The change in the in-stream waste concentration is based on the change in the duration of discharge.

Implementation of the Antidegradation Policy follows a tiered approach pursuant to the federal regulations (40 CFR 131.12) and consistent with the Connecticut Antidegradation Policy included in the Connecticut Water Quality Standards. Tier 1 Antidegradation review applies to all permitted discharge activities to all waters of the state. Tiers 1 and 2 Antidegradation reviews apply to all new or increased discharges to high quality waters and wetlands, while Tiers 1 and 3 Antidegradation reviews apply to all new or increased discharges to outstanding national resource waters.

This discharge is an existing discharge and the Permittee does not propose an increase in volume or concentration of constituents. Therefore, only the Tier 1 Antidegradation Evaluation and Implementation Review was conducted to ensure that existing and designated uses of surface waters and the water quality necessary for their protection are maintained and preserved, consistent with Connecticut Water Quality Standard, Sec.22a-426-8(a)(1). All narrative and numeric water quality standards, criteria and associated policies contained in the Connecticut Water Quality Standards are the basis for the evaluation considering the discharge or activity both independently and in the context of other discharges and activities in the affected water body and considering any impairment listed pursuant to Section 303d for the federal Clean Water Act or any TMDL established for the water body. The Department has determined that the discharges or activities are consistent with the maintenance, restoration, and protection of existing and designated uses assigned to the receiving water body by considering all relevant available data.

The receiving stream, Thames River, has been assessed and is listed as being impaired for its designated uses of habitat for marine fish, other aquatic life and wildlife. It is also impaired for its designated use of shellfish harvesting where authorized. The causes of impairment include fecal coliform, dissolved oxygen saturation and estuarine bioassessments. It is believed that potential sources may include industrial point source discharges, municipal discharges, landfills, illicit discharge, remediation sites or groundwater contamination. Although the permitted discharge is an industrial point source discharge, a total maximum daily load (TMDL) for E. coli has not been adopted for the receiving stream segment. The Department believes that E.coli may not be a pollutant of concern for this discharge. Previous DMR data have shown that BOD is not a parameter of concern and the act of pulling water from the river and returning it should not reduce the oxygen in the water, since no chemical is added. Therefore, at this time, no monitoring requirements for fecal coliform or dissolved oxygen was included in the permit.

The annual fee assigned to Shipbuilding discharge in RCSA Section 22a-430-7(Schedule B) is $8,425.00. However, since Thames Shipyard discharges for about one hour less than eight times a month, the annual fee amount is excessive in relation to the cost of the permitted activity. Therefore, it is recommended that the annual permit fees assigned to Thames Shipyard wastewater in RCSA Section 22a-430-7(Schedule B) be given a 33% reduction from $ 8,425.00 to $ 5,644.75 in accordance with section7(g) of RCSA.

APPENDIX A: WATER QUALITY BASED LIMITS CALCULATION

7Q10 OF THE RECEIVING STREAM

The previous zone of influence (ZOI) was carried forward in this permit renewal. In e-mails sent on November 6, 2015 and January 20, 2016, by Robert Tyler, a consultant to Thames Shipyard, it was stated that discharges could occur from the large and small docks in one day but such occurrence would be rare, approximately once per year. Therefore, analysis for acute criteria was based on prorated ZOI of 20,241,666 gph between the large and small dock discharges. For analysis based on chronic criteria, the ZOI was not prorated.

Permitted flow for DSN 101-1 = 5,000,000 gph (Typically discharges last for a maximum of I hour but not for 5,000,000 gallons. In order to discharge 5,000,000 gpd, it may take about 2.38 hours ≈ 2 hours (see the attached e-mail dated January 21, 2016 from Robert Tyler, a consultant to Thames Shipyard). Permitted flow for DSN 102-1 = 2,000,000 gph (Discharges last for a maximum of I hour)

For analysis based on acute criteria, total flow = 7.0 MGD where DSN 101-1 = 5.0 MGD and DSN 102-1 = 2.0 MGD. DSN 101-1 discharge occurs within 2 hours and DSN 102-1 occurs in one hour. Therefore, maximum discharge within one hour is 4.5 million gallons.

Dilution factor for both discharges (Acute criteria) $= \frac{AML+ZOI}{AML} = \frac{4{,}500{,}000+20{,}241666}{4{,}500{,}000} = 5.498148$

IWC for both discharges $= \frac{1}{DF}\ X\ 100\% = \frac{1}{5.498}\ X\ 100\% = 18.19\% \approx 18.2\%$

ZOI for DSN 101-1 = AML (Dilution factor – 1) = 2.5 million gallons per hour (5.498148 – 1) = 11,245,370 gph

ZOI for DSN 102-1 = AML (Dilution factor – 1) = 2.0 million gallons per hour (5.498148 – 1) = 8,996,296 gph

For analysis based on chronic criteria, total flow = 5.0 MGD where DSN 101-1 = 5.0 MGD or DSN 102-1 = 2.0 MGD. DSN 101-1 discharge of 5 MGD within 24 hours = 208,333 gph and DSN 102-1 discharge of 2MGD within 24 hours = 83,333 gpd.

Dilution factor for DSN 101-1 (Chronic criteria) $= \frac{AML+ZOI}{AML} = \frac{208{,}333+20{,}241{,}666}{208{,}333} = 98.16$

$IWC\ for\ DSN\ 101-1 = \frac{1}{DF}\ X\ 100\% = \frac{1}{98.16}\ X\ 100\% = 1.02\% \approx 1.0\%$

Dilution factor for DSN 102-1 (Chronic criteria) $= \frac{AML+ZOI}{AML} = 98.16 = \frac{83{,}333+ZOI}{83{,}333}$

ZOI for DSN 102-1 = 8,096,634 gph

The maximum daily limit for toxicity is based on the concentration that will prevent toxicity within the receiving stream as specified in section 22a-430-3(j)(7)(B)(i) of the RCSA.
Chronically toxic LC50 = Acceptable LC50 X 0.05
I.e. toxicity test LC50/0.05 = non-chronically toxic effluent % at ZOI border

Therefore, chronic toxicity limit: LC50 = IWC X 20 = 1.0 x 20 = 20%. The previous permit had a limit of LC50 $\geq$ 100% and the Permittee has been compliant with the limit without any exceedance. Therefore, based on best professional judgment and the anti-backsliding rule, the toxicity limit of 100% was carried forward.

TABLE A: DSN 101-1 DMR analytical data (March 2012 – March 2017)

DATE	Copper(µg/l)	Zinc(µg/l)
3/31/2012	103	41
4/30/2012	55	64
5/31/2012	283	190
6/30/2012	56	75
2/28/2013	ND ≈ 1.0	62
3/31/2013	28	75
4/30/2013	64	122
5/31/2013	87	106
6/30/2013	41	123
3/31/2014	26	60
6/30/2014	27	77
9/30/2014	23	34

12/31/2014	*25*	*24*
03/31/2015	*276*	*175*
06/30/2015	*88*	*66*
9/30/2015	*10*	*19*
12/31/2015	*27*	*26*
03/31/2016	*12*	*15*
06/30/2016	*10*	*19*
9/30/2016	*20*	*36*
12/31/2016	*33*	*31*
03/31/2017	*88*	*50*
$Cv = {}^{SD}/_{Mean}$	≈ 1.2	≈ 0.7

TABLE B: DSN 102-1 DMR analytical data (March 2012 – March 2016)

DATE	*Copper(µg/l)*	*Zinc(µg/l)*
3/31/2012	*105*	*116*
4/30/2012	*60*	*150*
5/31/2012	---	---
6/30/2012	*121*	*80*
2/28/2013	*42*	*79*
3/31/2013	*78*	*80*
4/30/2013	*42*	*67*
5/31/2013	*44*	*78*
6/30/2013	---	---
3/31/2014	*101*	*137*
6/30/2014	*15*	*60*
9/30/2014	*24*	*49*
12/31/2014	*41*	*63*
03/31/2015	*57*	*40*
06/30/2015	*23*	*28*
9/30/2015	*20*	*26*
12/31/2015	*55*	*45*
03/31/2016	*11*	*55*
06/30/2016	*36*	*71*
9/30/2016	*18*	*52*
12/31/2016	---	---
03/31/2017	*27*	*21*
$Cv = {}^{SD}/_{Mean}$	≈ 0.7	≈ 0.5

TABLE C: THAMES RIVER CONCENTRATION BASED ON CHRONIC TOXICITY TESTING RESULTS FROM JUNE 2001 TO AUGUST 2008 FOR DISCHARGES TO THE THAMES RIVER: Copper, Total = 4.13 µg/l (147 data) and Zinc, Total = 16.35 µg/l (150 data)

TABLE D: DSN 101-1: REASONABLE POTENTIAL EVALUATION

(This analysis compares the projected maximum concentration (MC) in the receiving stream after discharge with the applicable water quality standard. When the PMC is lower than the water quality criteria, this indicates that there is no potential for the discharge to exceed the water quality criteria. When the PMC is higher than the water quality criteria, this indicates that there is a potential for the discharge to exceed the water quality criteria and therefore limits are needed in the permit.)

$C_d = Downstream\ concentration,\ (QC)_d = Downstream\ data,\ (QC)_e = Effluent\ data\ and\ \ Q_d = Q_u + Q_e$

For Acute Criteria (DSN 101) *For Chronic Criteria(DSN 101)*

Q_u = 11,245,370 gph *Q_u = 20,241,666 gph*

Q_e = 2,500,000 gph *Q_e = 208,333 gph*

Q_d = 13,745,370 gph *Q_d = 20,449,999 gph*

Refer to the 1st paragraph of Attachment A for upstream and effluent flow

	$PMC\ in\ discharge = Measured\ max.conc.in\ discharge\ X\ multiplier\ in\ Table\ 3-1\ below$	$C_d = \frac{(QC)_u+(QC)_e}{Q_d}$ *(µg/l)*			***CONNECTICUT WATER QUALITY CRITERIA (WQC) (SALTWATER)***			$Is\ there\ reasonable\ potential\ to\ exceed\ WQC?$
					Aquatic Life (Acute) (µg/l)	*Aquatic Life (Chronic) (µg/l)*	*Human Health (µg/l)*	
Copper	$283\ X\ 4.2 = 1188.6$	Acute = 219.6	Chronic = 16.2	N/A	*4.8*	*3.1*	---	*Yes*
Zinc	$190\ X\ 2.6 = 494$	Acute = 103.2	Chronic = 21.2	Health = 21.2	*90*	*81*	*26,000*	*Yes*

TABLE G: DSN 102-1: REASONABLE POTENTIAL EVALUATION

(This analysis compares the projected maximum concentration (PMC) in the receiving stream after discharge with the applicable water quality standard. When the PMC is lower than the water quality criteria, this indicates that there is no potential for the discharge to exceed the water quality criteria. When the PMC is higher than the water quality criteria, this indicates that there is a potential for the discharge to exceed the water quality criteria and therefore limits are needed in the permit.)

$C_d = Downstream\ concentration,\ (QC)_d = Downstream\ data,\ (QC)_e = Effluent\ data\ and\ \ Q_d = Q_u + Q_e$

For Acute Criteria (DSN 102)
Q_u = 8,996,296 gph
Q_e = 2,000,000 gph
Q_d = 10,996,296 gph

For Chronic Criteria(DSN 102)
Q_u = 8,096,634 gph
Q_e = 83,333 gph
Q_d = 8,179,967 gph

Refer to the 1st paragraph of Attachment A for upstream and effluent flow

	$PMC\ in\ discharge = Measured\ max.conc.\ in\ discharge\ X\ multiplier\ in\ Table\ 3-1\ below$	$C_d = \frac{(QC)_u + (QC)_e}{Q_d}$ (µg/l)			CONNECTICUT WATER QUALITY CRITERIA (WQC) (SALTWATER)			$Is\ there\ reasonable\ potential\ to\ exceed\ WQC?$
					Aquatic Life (Acute) (µg/l)	Aquatic Life (Chronic) (µg/l)	Human Health (µg/l)	
Copper	$121\ X\ 2.7 = 326.7$	Acute = 62.8	Chronic = 7.4	**N/A**	*4.8*	*3.1*	---	*Yes*
Zinc	$150\ X\ 2.1 = 315$	Acute = 70.7	Chronic = 19.4	Health = 19.4	*90*	*81*	*26,000*	*No*

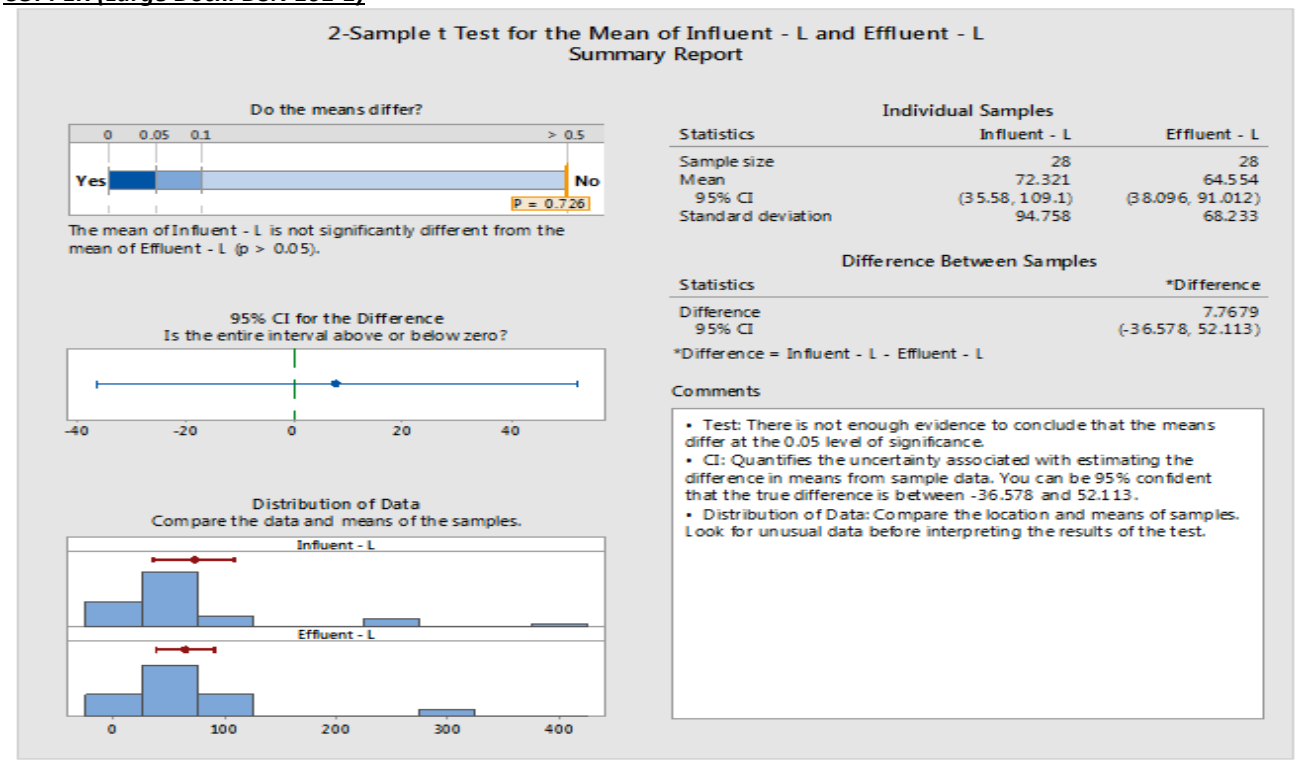
Table 3-1. Reasonable Potential Multiplying Factors: 99% Confidence Level and 99% Probability Basis

Number of	Coefficient of Variation																			
Samples	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
1	1.6	2.5	3.9	6.0	9.0	13.2	18.9	26.5	36.2	48.3	63.3	81.4	102.8	128.0	157.1	190.3	227.8	269.9	316.7	368.3
2	1.4	2.0	2.9	4.0	5.5	7.4	9.8	12.7	16.1	20.2	24.9	30.3	36.3	43.0	50.4	58.4	67.2	76.6	86.7	97.5
3	1.4	1.9	2.5	3.3	4.4	5.6	7.2	8.9	11.0	13.4	16.0	19.0	22.2	25.7	29.4	33.5	37.7	42.3	47.0	52.0
4	1.3	1.7	2.3	2.9	3.8	4.7	5.9	7.2	8.7	10.3	12.2	14.2	16.3	18.6	21.0	23.6	26.3	29.1	32.1	35.1
5	1.3	1.7	2.1	2.7	3.4	4.2	5.1	6.2	7.3	8.6	10.0	11.5	13.1	14.8	16.6	18.4	20.4	22.4	24.5	26.6
6	1.3	1.6	2.0	2.5	3.1	3.8	4.6	5.5	6.4	7.5	8.6	9.8	11.1	12.4	13.8	15.3	16.8	18.3	19.9	21.5
7	1.3	1.6	2.0	2.4	2.9	3.6	4.2	5.0	5.8	6.7	7.7	8.7	9.7	10.8	12.0	13.1	14.4	15.6	16.9	18.2
8	1.2	1.5	1.9	2.3	2.8	3.3	3.9	4.6	5.3	6.1	6.9	7.8	8.7	9.6	10.6	11.6	12.6	13.6	14.7	15.8
9	1.2	1.5	1.8	2.2	2.7	3.2	3.7	4.3	5.0	5.7	6.4	7.1	7.9	8.7	9.6	10.4	11.3	12.2	13.1	14.0
10	1.2	1.5	1.8	2.2	2.6	3.0	3.5	4.1	4.7	5.3	5.9	6.6	7.3	8.0	8.8	9.5	10.3	11.0	11.8	12.6
11	1.2	1.5	1.8	2.1	2.5	2.9	3.4	3.9	4.4	5.0	5.6	6.2	6.8	7.4	8.1	8.8	9.4	10.1	10.8	11.5
12	1.2	1.4	1.7	2.0	2.4	2.8	3.2	3.7	4.2	4.7	5.2	5.8	6.4	7.0	7.5	8.1	8.8	9.4	10.0	10.6
13	1.2	1.4	1.7	2.0	2.3	2.7	3.1	3.6	4.0	4.5	5.0	5.5	6.0	6.5	7.1	7.6	8.2	8.7	9.3	9.9
14	1.2	1.4	1.7	2.0	2.3	2.6	3.0	3.4	3.9	4.3	4.8	5.2	5.7	6.2	6.7	7.2	7.7	8.2	8.7	9.2
15	1.2	1.4	1.6	1.9	2.2	2.6	2.9	3.3	3.7	4.1	4.6	5.0	5.4	5.9	6.4	6.8	7.3	7.7	8.2	8.7
16	1.2	1.4	1.6	1.9	2.2	2.5	2.9	3.2	3.6	4.0	4.4	4.8	5.2	5.6	6.1	6.5	6.9	7.3	7.8	8.2
17	1.2	1.4	1.6	1.9	2.1	2.5	2.8	3.1	3.5	3.8	4.2	4.6	5.0	5.4	5.8	6.2	6.6	7.0	7.4	7.8
18	1.2	1.4	1.6	1.8	2.1	2.4	2.7	3.0	3.4	3.7	4.1	4.4	4.8	5.2	5.6	5.9	6.3	6.7	7.0	7.4
19	1.2	1.4	1.6	1.8	2.1	2.4	2.7	3.0	3.3	3.6	4.0	4.3	4.6	5.0	5.3	5.7	6.0	6.4	6.7	7.1
20	1.2	1.3	1.6	1.8	2.0	2.3	2.6	2.9	3.2	3.5	3.8	4.2	4.5	4.8	5.2	5.5	5.8	6.1	6.5	6.8

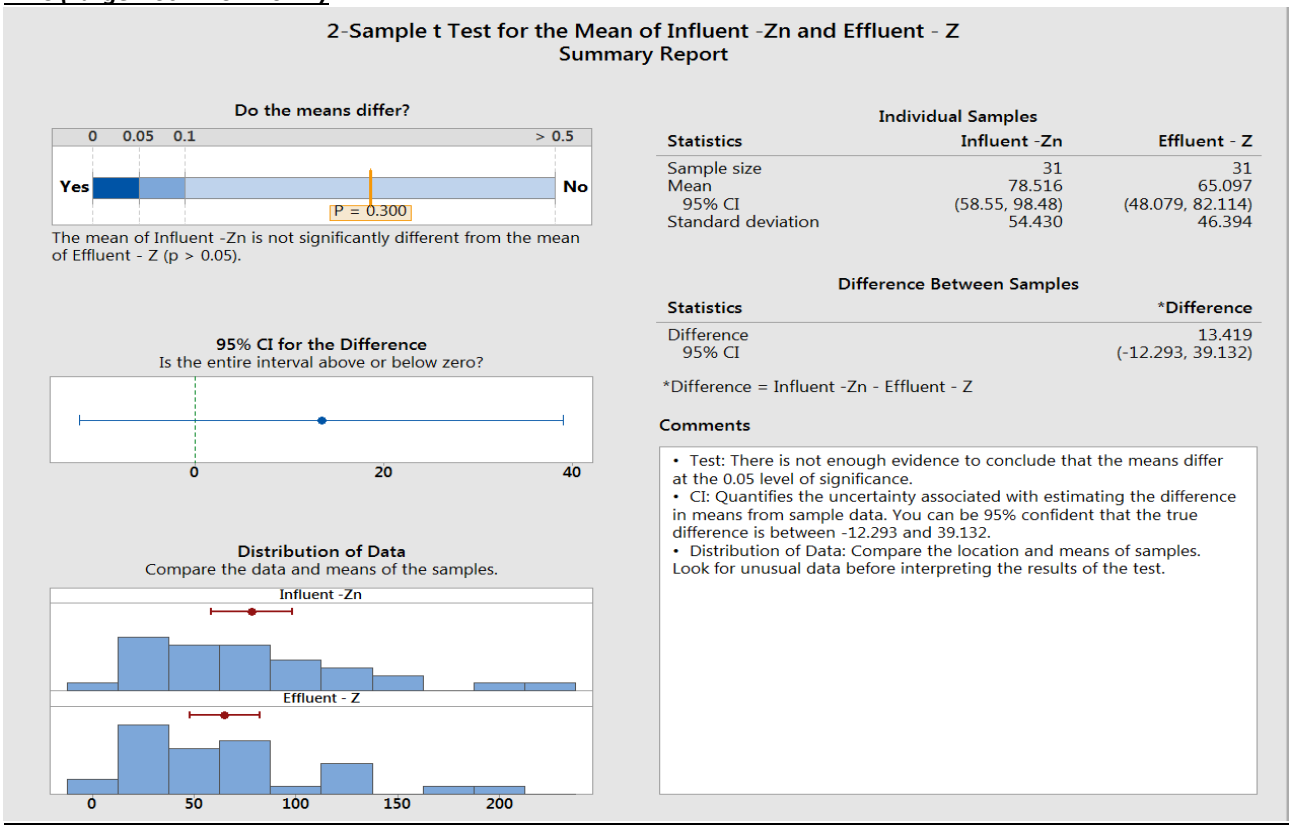
The reasonable potential analysis above suggests that limits are needed for copper and zinc at DSN 101 and for copper at DSN 102. However, on January 21, 2016 and August 21, 2016, the Permittee submitted analytical data to support the claim that there is no significant difference between the copper and zinc concentrations in its influent and effluent. Pursuant to 22a-430-4(l)(4)(A)(x)(1) of the Regulations of Connecticut State Agencies, the Department performed an analysis to evaluate whether the use of the water at the facility caused or contributed to any unacceptable increase in copper and zinc concentrations in the effluent as compared to those present in the influent. There was a finding that there is essentially no "net" increase of copper and zinc concentrations in the effluent as a result of water use at the facility. This demonstrates that the discharge is consistent with the Connecticut Water Quality Standards and is unlikely to cause or contribute to any potential increases in copper and zinc concentrations within Thames River (see Appendix B). Therefore, permit limits were not calculated for copper and zinc in this permit.

APPENDIX B: THAMES SHIPYARD NO NET INCREASE ANALYSIS

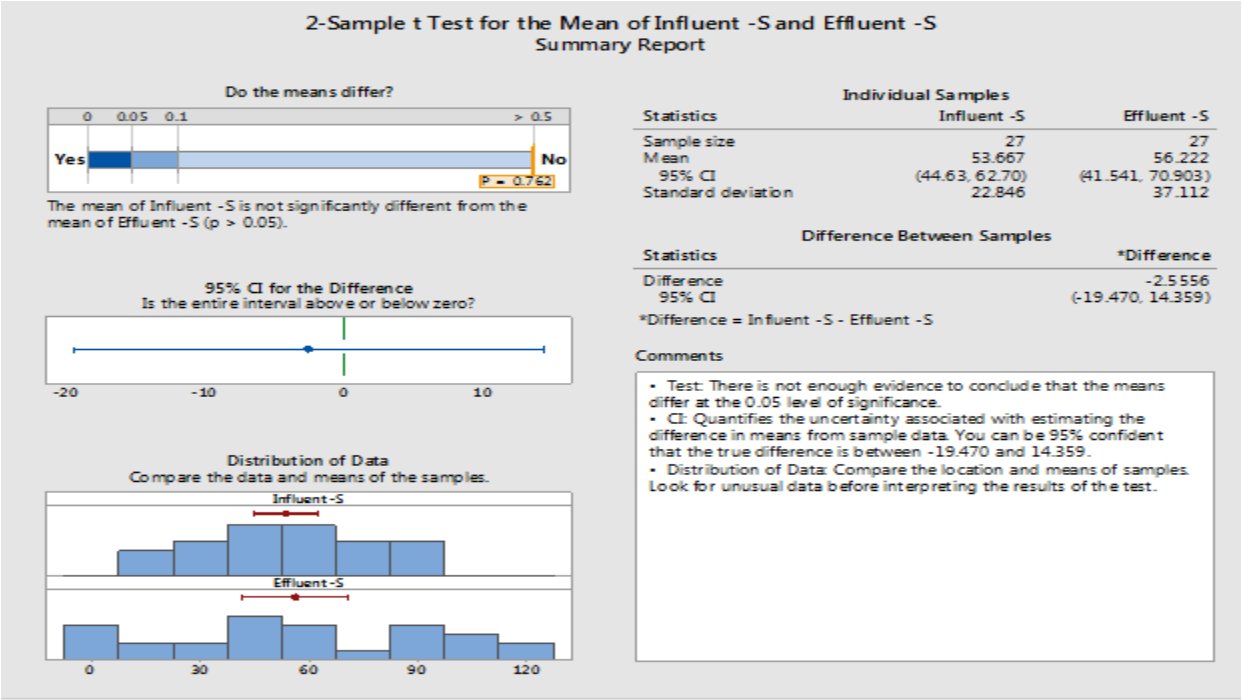
COPPER (Large Dock: DSN 101-1)



ZINC (Large Dock: DSN 101-1)



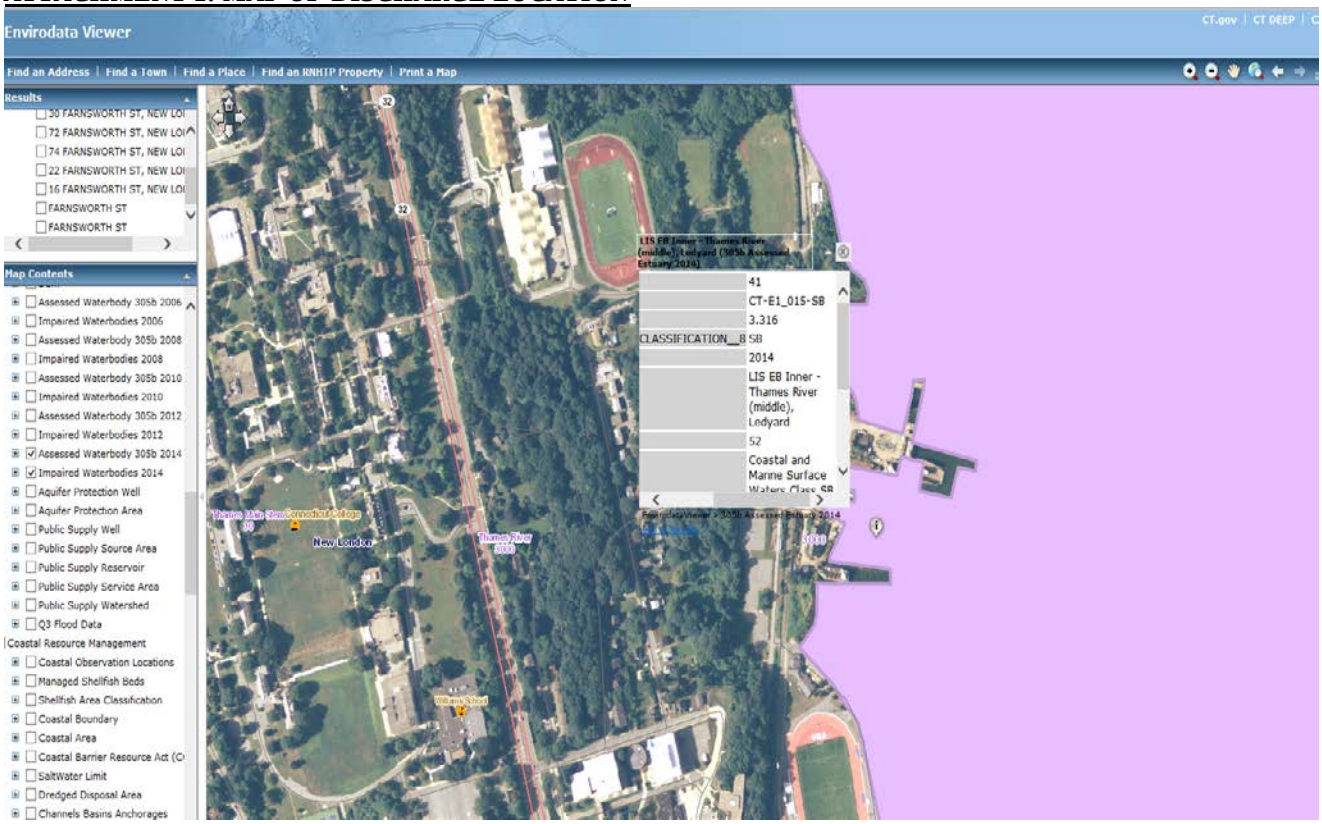
COPPER (Small Dock: DSN 102-1)



2010 – 2015 INFLUENT AND EFFLUENT DATA FOR COPPER AND ZINC

COPPER (LARGE DOCK) in µg/l		ZINC (LARGE DOCK) in µg/l		COPPER (SMALL DOCK) in µg/l	
Influent	Effluent	Influent	Effluent	Influent	Effluent
20	40	30	30	70	5
30	5	20	20	10	40
5	30	20	10	50	5
10	20	10	10	20	5
30	20	40	50	30	5
31	50	47	41	45	88
33	44	58	67	66	105
65	59	67	119	90	60
78	117	50	59	88	121
45	115	126	120	70	83
104	103	102	64	45	88
68	55	161	190	66	105
274	283	88	75	90	60
59	56	101	75	88	121
115	76	126	49	70	83
2.5	12.5	78	62	29	42
36	28	79	75	47	78
58	64	124	122	52	42
65	87	104	106	54	44
50	41	148	123	55	57
12.5	26	73	60	28	101
26	27	48	77	19	15
54	23	66	34	53	24
17	25	18	24	49	41
273	276	199	175	53	57
417	88	235	66	80	23
22	10	33	19	32	20
25	27	31	26		
		30	15		
		56	19		

ATTACHMENT 1: MAP OF DISCHARGE LOCATION



ATTACHMENT 2: ASSESSED WATERBODY REPORT PURSUANT TO SECTIONS 305(b) and 303(d) OF THE FEDERAL CWA

Connecticut 2014 305b Assessment Results ESTUARIES TABLE 2-6

Waterbody Segment ID	Waterbody Name	Location	Square Miles	Aquatic Life	Recreation	Shellfish	Shellfish Class
CT-E1_013	LIS EB Inner - Baker Cove, Groton	See Map for Boundaries. Eastern portion of LIS, Inner Estuary, Baker cove from Avery Point and tip of Pine Island, to mouth of Poquonuck River (South of Groton-New London Airport), Groton.	0.314	Not Assessed	Not Assessed	Not Supporting	Direct Consumption
CT-E1_014-SB	LIS EB Inner - Thames River (Mouth), New London	See Map for Boundaries. Eastern portion of LIS, Inner Estuary, mouth of Thames River from Eastern Point (North of Avery Point), US to I95 crossing (Includes Inner New London Harbor), Groton.	1.994	Not Supporting	Fully Supporting	Not Supporting	Commercial Harvesting
CT-E1_015-SB	LIS EB Inner - Thames River (middle), Ledyard	See Map for Boundaries. Eastern portion of LIS, Inner Estuary, Thames River from I95 crossing, US to just below outlet of Poquetanuck Cove (near Walden Island), and adjacent to Route 12 at Cardinal Lane intersection, Ledyard.	3.316	Not Supporting	Not Supporting	Not Supporting	Commercial Harvesting
		See Map for Boundaries. Eastern portion of LIS, Inner Estuary, Thames River from just below outlet of Poquetanuck Cove (near Walden Island), adjacent to					

Table 3-4. Connecticut Impaired Waters List (EPA Category 5)

Waterbody Segment ID	Waterbody Name	Waterbody Type	Waterbody Size	Units	Impaired Designated Use	Cause	Comment
CT-E1_001-SB	LIS EB Inner - Pawcatuck River (01), Stonington	Estuary	0.103	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Nutrient/ Eutrophication Biological Indicators	Potential sources include industrial point source discharges, municipal discharges, illicit discharge, remediation sites, groundwater contamination
CT-E1_001-SB	LIS EB Inner - Pawcatuck River (01), Stonington	Estuary	0.103	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Oxygen, Dissolved	Potential sources include industrial point source discharges, municipal discharges, illicit discharge, remediation sites, groundwater contamination
CT-E1_001-SB	LIS EB Shore - Wequetequock Cove, Stonington	Estuary	0.619	Square Miles	Recreation	Enterococcus	
CT-E1_003	LIS EB Inner - Inner Wequetequock Cove, Stonington	Estuary	0.094	Square Miles	Recreation	Enterococcus	
CT-E1_014-SB	LIS EB Inner - Thames River (Mouth), New London	Estuary	1.994	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Dissolved oxygen saturation	Potential sources include industrial point discharges, municipal discharges, illicit discharges, remediation sites, groundwater contamination
CT-E1_014-SB	LIS EB Inner - Thames River (Mouth), New London	Estuary	1.994	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Estuarine Bioassessments	Potential sources include industrial point discharges, municipal discharges, illicit discharges, remediation sites, groundwater contamination
CT-E1_014-SB	LIS EB Inner - Thames River (Mouth), New London	Estuary	1.994	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Oxygen, Dissolved	
CT-E1_015-SB	LIS EB Inner - Thames River (middle), Ledyard	Estuary	3.316	Square Miles	Commercial Shellfish Harvesting Where Authorized	Fecal Coliform	Potential sources include industrial point source discharges, municipal discharges, landfills, illicit discharges, remediation sites, groundwater contamination
CT-E1_015-SB	LIS EB Inner - Thames River (middle), Ledyard	Estuary	3.316	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Dissolved oxygen saturation	Potential sources include industrial point source discharges, municipal discharges, landfills, illicit discharges, remediation sites, groundwater contamination

Table 3-4. Connecticut Impaired Waters List (EPA Category 5)

Waterbody Segment ID	Waterbody Name	Waterbody Type	Waterbody Size	Units	Impaired Designated Use	Cause	Comment
CT-E1_015-SB	LIS EB Inner - Thames River (middle), Ledyard	Estuary	3.316	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Estuarine Bioassessments	Potential sources include industrial point source discharges, municipal discharges, landfills, illicit discharges, remediation sites, groundwater contamination
CT-E1_015-SB	LIS EB Inner - Thames River (middle), Ledyard	Estuary	3.316	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Oxygen, Dissolved	
CT-E1_016-SB	LIS EB Inner - Thames River (Upper), Norwich	Estuary	1.555	Square Miles	Commercial Shellfish Harvesting Where Authorized	Fecal Coliform	Potential sources include industrial point source discharges, municipal discharges, landfills, illicit discharge, remediation sites, groundwater contamination, on-site treatment systems (septic systems and similar decentralized systems), combined sewer overflow
CT-E1_016-SB	LIS EB Inner - Thames River (Upper), Norwich	Estuary	1.555	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Dissolved oxygen saturation	Potential sources include industrial point source discharges, municipal discharges, landfills, illicit discharge, remediation sites, groundwater contamination, on-site treatment systems (septic systems and similar decentralized systems), combined sewer overflow
CT-E1_016-SB	LIS EB Inner - Thames River (Upper), Norwich	Estuary	1.555	Square Miles	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Estuarine Bioassessments	Potential sources include industrial point source discharges, municipal discharges, landfills, illicit discharge, remediation sites, groundwater contamination, on-site treatment systems (septic systems and similar decentralized systems), combined sewer overflow

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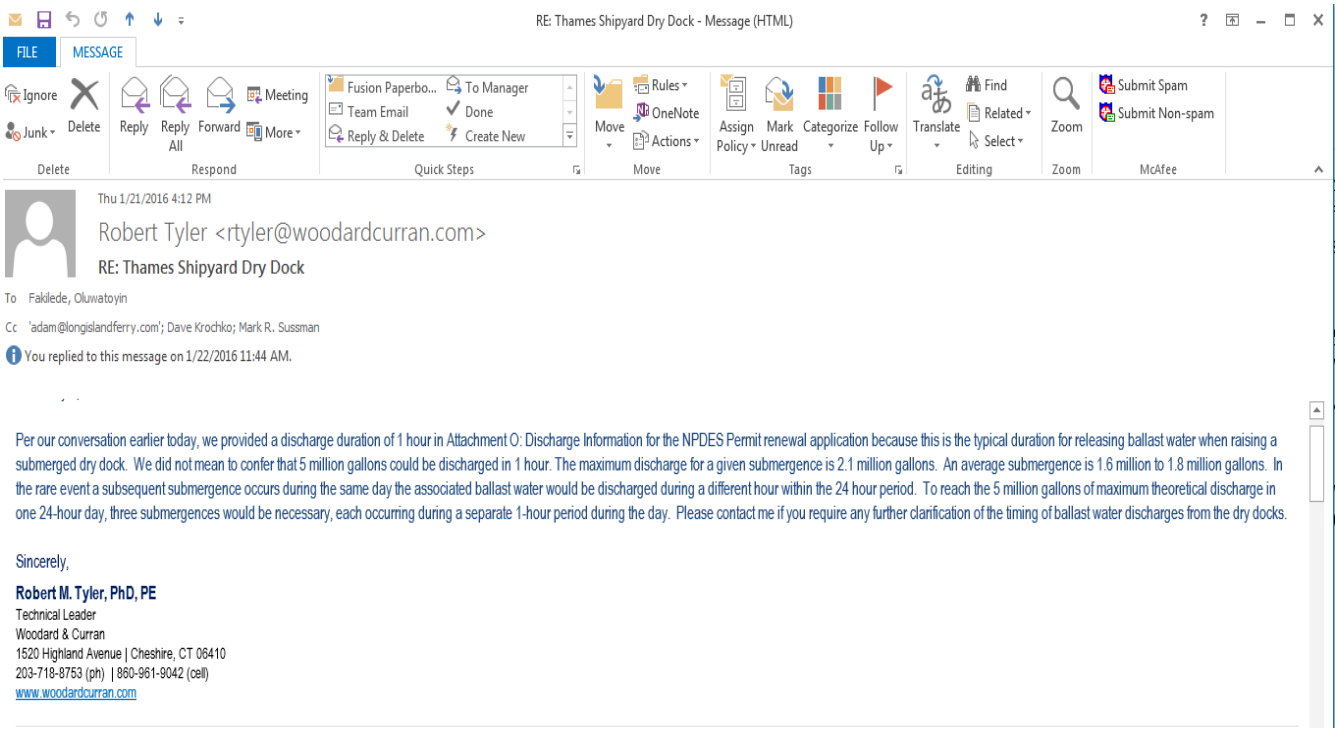
ATTACHMENT 3 E-MAIL MESSAGE ON DISCHARGE DURATION



RE: Thames Shipyard Dry Dock - Message (HTML)

FILE MESSAGE

Ignore Junk Delete | Reply Reply All Forward Meeting More | Fusion Paperbo... Team Email Reply & Delete To Manager Done Create New | Move Rules OneNote Actions | Assign Policy Mark Unread Categorize Follow Up | Translate Find Related Select | Zoom | Submit Spam Submit Non-spam

Delete Respond Quick Steps Move Tags Editing Zoom McAfee

Thu 1/21/2016 4:12 PM

Robert Tyler <rtyler@woodardcurran.com>

RE: Thames Shipyard Dry Dock

To Fakilede, Oluwatoyin

Cc 'adam@longislandferry.com'; Dave Krochko; Mark R. Sussman

You replied to this message on 1/22/2016 11:44 AM.

Per our conversation earlier today, we provided a discharge duration of 1 hour in Attachment O: Discharge Information for the NPDES Permit renewal application because this is the typical duration for releasing ballast water when raising a submerged dry dock. We did not mean to confer that 5 million gallons could be discharged in 1 hour. The maximum discharge for a given submergence is 2.1 million gallons. An average submergence is 1.6 million to 1.8 million gallons. In the rare event a subsequent submergence occurs during the same day the associated ballast water would be discharged during a different hour within the 24 hour period. To reach the 5 million gallons of maximum theoretical discharge in one 24-hour day, three submergences would be necessary, each occurring during a separate 1-hour period during the day. Please contact me if you require any further clarification of the timing of ballast water discharges from the dry docks.

Sincerely,

Robert M. Tyler, PhD, PE
Technical Leader
Woodard & Curran
1520 Highland Avenue | Cheshire, CT 06410
203-718-8753 (ph) | 860-961-9042 (cell)
www.woodardcurran.com

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

NOTICE OF TENTATIVE DECISION
INTENT TO RENEW A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT FOR THE FOLLOWING DISCHARGE INTO THE WATERS OF THE STATE OF CONNECTICUT

TENTATIVE DECISION

The Commissioner of Energy and Environmental Protection ("the Commissioner") hereby gives notice of a tentative decision to renew a permit based on an application submitted by **The Thames Shipyard & Repair Company** ("the applicant") under section 22a-430 of the Connecticut General Statutes ("C.G.S.") for a permit to discharge into the waters of the state.

In accordance with applicable federal and state law, the Commissioner has made a tentative decision that the discharge will not cause pollution of the waters of the state and the Commissioner proposes to renew a permit for the discharge to the Thames River.

The proposed permit, if issued by the Commissioner, will require periodic monitoring to demonstrate that the discharge will not cause pollution.

APPLICANT'S PROPOSAL

The Thames Shipyard & Repair Company presently discharges a maximum flow of 7.6 million gallons per day of ballast water but proposes to reduce the flow and discharge a maximum flow of 7.0 million gallons per day of ballast water to the Thames River from dry docks at a shipbuilding facility.

The name and mailing address of the permit applicant are: The Thames Shipyard & Repair Company, 2 Ferry Street, New London, CT 06320.

The activity takes place at: The west bank of the Thames River, one mile north of the Gold star Memorial Bridge.

The proposed activity is within the coastal area as defined in C.G.S. Section 22a-94. Pursuant to C.G.S. Section 22a-98, the applicant must demonstrate that the activities are consistent with all applicable goals and policies in C.G.S. Section 22a-92, and that such activities incorporate all reasonable measures mitigating any adverse impacts on coastal resources and future water-dependent development activities.

REGULATORY CONDITIONS

Type of Treatment

DSNs 101-1 and 102-1: No treatment is necessary.

Effluent Limitations

This permit contains effluent limitations consistent with a Case by Case Determination using the criteria of Best Professional Judgment and which will protect the waters of the state from pollution when all the conditions of this permit have been met.

COMMISSIONER'S AUTHORITY

The Commissioner is authorized to approve or deny such permits pursuant to section 402(b) of the Federal Water Pollution Control Act, as amended, 33 USC 1251, et. seq. and section 22a-430 of the C.G.S. and the Water Discharge Permit Regulations (section 22a-430-3 and 4 of the Regulations of Connecticut State Agencies).

INFORMATION REQUESTS

The application has been assigned the following numbers by the Department of Energy and Environmental Protection. Please use these numbers when corresponding with this office regarding this application.

APPLICATION NO. 201402935 PERMIT ID NO. CT0030333

Interested persons may obtain copies of the application from Adam Wronowski, The Thames Shipyard & Repair Company, 2 Ferry Street, New London, CT 06320, (860) 442-5349.

The application is available for inspection by contacting Oluwatoyin Fakilede at 860-424-3025, at the Department of Energy and Environmental Protection, Bureau of Materials Management and Compliance Assurance, 79 Elm Street, Hartford, CT 06106-5127 from 8:30 - 4:30, Monday through Friday.

Any interested person may request in writing that his or her name be put on a mailing list to receive notice of intent to issue any permit to discharge to the surface waters of the state. Such request may be for the entire state or any geographic area of the state and shall clearly state in writing the name and mailing address of the interested person and the area for which notices are requested.

PUBLIC COMMENT

Prior to making a final determination to approve or deny any application, the Commissioner shall consider written comments on the application from interested persons that are received within 30 days of this public notice. Written comments should be directed to Oluwatoyin Fakilede, Bureau of Materials Management and Compliance Assurance, Department of Energy and Environmental Protection, 79 Elm Street, Hartford, CT 06106-5127. The Commissioner may hold a public hearing prior to approving or denying an application if in the Commissioner's discretion the public interest will be best served thereby, and shall hold a hearing upon receipt of a petition signed by at least twenty-five persons. Notice of any public hearing shall be published at least 30 days prior to the hearing.

Petitions for a hearing should include the application number noted above and also identify a contact person to receive notifications. Petitions may also identify a person who is authorized to engage in discussions regarding the application and, if resolution is reached, withdraw the petition. Original petitions must be *mailed or delivered* to: DEEP Office of Adjudications, 79 Elm Street, 3rd floor, Hartford, CT 06106-5127. Petitions cannot be sent by fax or email. Additional information can be found at www.ct.gov/deep/adjudications.

The Connecticut Department of Energy and Environmental Protection is an Affirmative Action and Equal Opportunity Employer that is committed to complying with the Americans with Disabilities Act. To request an accommodation contact us at (860) 418-5910 or deep.accommodations@ct.gov.

Oswald Inglese, Jr.
Director
Water Permitting and Enforcement Division
Bureau of Materials Management and Compliance Assurance

Dated:

AUG 14 2018