

**NPDES PERMIT**

**issued to**

Ansonia Copper & Brass, Inc.  
725 Bank Street  
Waterbury, CT 06708

**Location Address:**

75 Liberty Street  
Ansonia, CT 06401

**Facility ID:** 002-002

**Permit ID:** CT0002968

**Receiving Stream:** Naugatuck River

**Permit Expires:** **August 14, 2016**

**Stream Segment ID:** CT6900-00\_01

**SECTION 1: GENERAL PROVISIONS**

- (A) This permit is issued 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) Ansonia Copper & Brass, Inc., ("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**

- (a) Definitions
- (b) General
- (c) Inspection and Entry
- (d) Effect of a Permit
- (e) Duty
- (f) Proper Operation and Maintenance
- (g) Sludge Disposal
- (h) Duty to Mitigate
- (i) Facility Modifications; Notification
- (j) Monitoring, Records and Reporting Requirements
- (k) Bypass
- (l) Conditions Applicable to POTWs
- (m) Effluent Limitation Violations (Upsets)
- (n) Enforcement
- (o) Resource Conservation
- (p) Spill Prevention and Control
- (q) Instrumentation, Alarms, Flow Recorders
- (r) Equalization

**Section 22a-430-4 Procedures and Criteria**

- (a) Duty to Apply
  - (b) Duty to Reapply
  - (c) Application Requirements
  - (d) Preliminary Review
  - (e) Tentative Determination
  - (f) Draft Permits, Fact Sheets
  - (g) Public Notice, Notice of Hearing
  - (h) Public Comments
  - (i) Final Determination
  - (j) Public Hearings
  - (k) Submission of Plans and Specifications. Approval.
  - (l) Establishing Effluent Limitations and Conditions
  - (m) Case by Case Determinations
  - (n) Permit issuance or renewal
  - (o) Permit Transfer
  - (p) Permit revocation, denial or modification
  - (q) Variances
  - (r) Secondary Treatment Requirements
  - (s) Treatment Requirements for Metals and Cyanide
  - (t) Discharges to POTWs - Prohibitions
- (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.

**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.

"Annual" in the context of any sampling frequency found in Section 5, shall mean the sample must be collected in the month of January.

"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.

"Dry weather discharge sampling" means the sampling of any discharge to a surface water that is not comingled with precipitation, snow melt, or ice melt.

"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 sampling is required in the months of January, April, July, and October.

"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 for Table A, means the sample must be in the months of January and July.

"Semi-Annual" in the context of a sampling frequency for Table B, means that one sample must be collected between October 1 and March 31, the other sample must be collected between April 1 and September 30, and monitoring events shall be separated by at least 30 days.

"µg/l" means micrograms per liter.

"Wet weather discharge sampling" means the sampling of any discharge to a surface water that is comingled with precipitation, snow melt, or ice melt.

### **SECTION 3: COMMISSIONER'S DECISION**

- (A) The Commissioner has issued a final determination and found that continuance of the existing system to treat the discharge will protect the waters of the state from pollution. The Commissioner's decision is based on Application No. 201005767 for permit reissuance received on September 22, 2010 and the administrative record established in the processing of that application.
- (B) The Commissioner hereby authorizes the Permittee to discharge in accordance with the provisions of this permit, the above referenced application, and all approvals issued by the Commissioner or the Commissioner's authorized agent for the discharges 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.
- (D) This permit also includes determinations regarding section 316(a) of the federal Water Pollution Control Act 33 U.S.C. § 1326(a) regarding the thermal component of the discharge, and compliance with this permit is sufficient to assure the protection and propagation of a balanced indigenous population of shellfish, fish and wildlife in and on the receiving waters. This permit also contains a determination under section 316(b) of the federal Water Pollution Control Act, 33 U.S.C. § 1326(b) regarding cooling water intake structures and Conn. Gen. Stat. § 22a-430(a).

### **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 85°F, or, in any case, raise the normal temperature of the receiving stream more than 4°F.

### **SECTION 5: SPECIFIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

- (A) The discharge shall not exceed and shall otherwise conform to the specific terms and conditions listed below. The discharge is restricted by, and shall be monitored in accordance with, the table below:

**Table A (Dry weather sampling)**

**Discharge Serial Number: 002-1** **Monitoring Location:1**  
**Wastewater Description: Contact cooling water from casting shop cooling tower, minor steam cleaning , Rex unit (O/W separator), extrusion quench, annealing quench and laboratory wastewaters, and wastewaters from sump, sinks and drains (Stormwater is not included during sampling)**  
**Monitoring Location Description: Discharge pipe for the final effluent tank**

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test <sup>3</sup>
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency <sup>2</sup>	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/Reporting Frequency	Sample Type or measurement to be reported	
Arsenic, Total	µg/l	5.0	5.0	Annually	Daily Composite	5.0	NR	NA	*
Aquatic Toxicity, Daphnia pulex <sup>4</sup> LC50	%	NA	LC50>20	Semi-annually	Daily Composite	LC50>6.7	NR	Grab	
Aquatic Toxicity, Pimephales promelas <sup>4</sup> LC50	%	NA	LC50>20	Annually	Daily Composite	LC50>6.7	NR	Grab	
Cadmium, Total	mg/l	0.1	0.5	Monthly	Daily Composite	0.75	NR	NA	*
Cadmium, Total	gr/d	5.9	11.6	Monthly	Daily Composite	17.4	NR	NA	
Chlorine, Total Residual	mg/l	NA	NA	NR	NA	----	Semi-annually	Grab	*
Chromium, Total	mg/l	1.0	1.2	Monthly	Daily Composite	1.8	NR	NA	*
Copper, Total	mg/l	0.77	1.42	Twice per month	Daily Composite	2.13	NR	NA	*
Copper, Total	gr/d	75.0	148.0	Twice per month	Daily Composite	222.0	NR	NA	
Flow, Maximum during a 24 hour period <sup>1</sup>	gpd	NA	14,155	Continuous	Total Daily Flow	NA	NR	NA	
Flow, (Day of sampling)	gpd	NA	14,155	Twice per month	Total Daily Flow	NA	NR	NA	
Iron, Total	mg/l	3.0	5.0	Monthly	Daily Composite	7.5	NR	NA	
Lead, Total	mg/l	0.1	0.5	Monthly	Daily Composite	0.75	NR	NA	*
Nickel, Total	mg/l	0.5	1.0	Monthly	Daily Composite	1.5	NR	NA	*
Nitrogen, Ammonia (Total as N)	mg/l	NA	----	Semi-annually	Daily Composite	NA	NR	NA	
Nitrogen, Nitrate (Total as N)	mg/l	NA	----	Semi-annually	Daily Composite	NA	NR	NA	
Nitrogen, Nitrite (Total as N)	mg/l	NA	----	Semi-annually	Daily Composite	NA	NR	NA	
pH, Day of Sampling	S.U.	NA	NA	NR	NA	7.5 – 9.9	Twice per month	RDS	
pH, Minimum	S.U.	NA	NA	NR	NA	7.5	Continuous	Continuous	
pH, Maximum	S.U.	NA	NA	NR	NA	9.9	Continuous	Continuous	
Phosphorus, Total	mg/l	NA	----	Semi-annually	Daily Composite	NA	NR	NA	
Total oil and grease	mg/l	NA	NA	NR	NA	10.0	Monthly	Grab	
Total Suspended Solids	mg/l	20.0	30.0	Monthly	Daily Composite	45.0	NR	NA	
Total Toxic Organics	mg/l	NA	NA	NR	NA	2.13	Monthly	Grab	
Zinc, Total	mg/l	0.53	1.40	Monthly	Daily Composite	2.10	NR	NA	*

**Table Footnotes and Remarks:**

**Footnotes:**

<sup>1</sup> For this parameter, the Permittee shall maintain at the facility a record of the total flow for each day of dry weather and shall report the the Maximum Daily Flow for dry weather discharge for each sampling month.

<sup>2</sup> 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'.

<sup>3</sup> Minimum Level Test refers to Section 6, Paragraph (A)(3) of this permit.

<sup>4</sup> Dry weather discharge sampling shall be taken after two days (48 hours) of antecedent dry weather to assure a negligible presence of stormwater in the discharge. Aquatic toxicity testing as specified in Table A above shall be performed during dry weather discharge only. Sampling shall be conducted according to the requirements above unless climatic conditions preclude, in which case the sample shall be taken at a time as closely approximating to the conditions as possible.

<sup>5</sup> The results of the Toxicity Tests shall be recorded in % survival on the DMR. Aquatic toxicity testing specified in Table A above shall be performed during dry weather sampling only.

**Remarks:**

- a) See Section 6(C) for chronic toxicity requirements.
- b) All analysis shall be on the same sample.

**Table B (Wet weather sampling)**

**Discharge Serial Number: 002-1** **Monitoring Location:1**

**Wastewater Description: Treated stormwater and contact cooling water from casting shop cooling tower, minor steam cleaning , Rex unit (O/W separator), extrusion quench, annealing quench and laboratory wastewaters, and wastewaters from sump, sinks and drains**

**Monitoring Location Description: Discharge pipe for the final effluent tank**

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test <sup>3</sup>
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency <sup>2</sup>	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/Reporting Frequency	Sample Type or measurement to be reported	
Aquatic Toxicity, Daphnia pulex <sup>4</sup> LC50	%	NA	LC50>20	Semi-annually	Daily Composite	LC50>6.7	NR	NA	
Cadmium, Total	mg/l	0.03	0.08	Semi-annually	Daily Composite	0.11	NR	NA	*
Cadmium, Total	gr/d	5.9	11.6	Semi-annually	Daily Composite	17.4	NR	NA	
Chromium, Total	mg/l	0.16	0.28	Semi-annually	Daily Composite	0.40	NR	NA	*
Copper, Total	mg/l	0.33	0.41	Semi-annually	Daily Composite	0.62	NR	NA	*
Fecal coliform	#/100 ml	NA	NA	NR	NA	----	Semi-annually	Grab	
Flow Rate, (Average Daily) <sup>1</sup>	gpd	60,000	NA	Continuous	Total Daily Flow	NA	NR	NA	
Flow, Maximum during a 24 hour period <sup>1</sup>	gpd	NA	119,455	Continuous	Total Daily Flow	NA	NR	NA	
Flow, (Day of sampling)	gpd	NA	119,455	Semi-annually	Total Daily Flow	NA	NR	NA	
Iron, Total	mg/l	0.64	0.88	Semi-annually	Daily Composite	1.17	NR	NA	
Lead, Total	mg/l	0.05	0.09	Semi-annually	Daily Composite	0.12	NR	NA	*
Nickel, Total	mg/l	0.17	0.29	Semi-annually	Daily Composite	0.40	NR	NA	*
Nitrogen, Ammonia (Total as N)	mg/l	NA	----	Semi-annually	Daily Composite	NA	NR	NA	
Nitrogen, Nitrate (Total as N)	mg/l	NA	----	Semi-annually	Daily Composite	NA	NR	NA	
pH, Day of Sampling	S.U.	NA	NA	NR	NA	7.5 – 9.9	Semi-annually	RDS	
pH, Minimum	S.U.	NA	NA	NR	NA	7.5	Continuous	Continuous	
pH, Maximum	S.U.	NA	NA	NR	NA	9.9	Continuous	Continuous	
Phosphorus, Total	mg/l	NA	----	Semi-annually	Daily Composite	NA	NR	NA	
Total oil and grease	mg/l	NA	NA	NR	NA	10.0	Semi-annually	Grab	
Total Suspended Solids	mg/l	20.0	30.0	Semi-annually	Daily Composite	45.0	NR	NA	
Zinc, Total	mg/l	0.18	0.28	Semi-annually	Daily Composite	0.37	NR	NA	*

**Table Footnotes and Remarks:**

**Footnotes:**

<sup>1</sup> For this parameter, the Permittee shall maintain at the facility a record of the total flow for each day of dry weather and wet weather discharge and shall report the Average Daily Flow and the Maximum Daily Flow for dry and wet weather discharges for each sampling month.

<sup>2</sup> 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'.

<sup>3</sup> Minimum Level Test refers to Section 6, Paragraph (A)(3) of this permit.

<sup>4</sup> The results of the Toxicity Tests shall be recorded in % survival on the DMR. Aquatic toxicity testing specified in Table B above shall be performed during wet weather discharge sampling only.

**Remarks:**

a) All analysis shall be on the same sample.



- (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.
- (3) The limits imposed on the discharges listed in this permit take effect on the issuance date of this permit, hence any sample taken after this date which, upon analysis, shows an exceedance of permit limits will be considered non-compliance.

The monitoring requirements begin on the date of issuance of this permit if the issuance date is on or before the 12th day of a month. For permits issued on or after the 13th day of a month, monitoring requirements begin the 1st day of the following month.

## 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 methods approved pursuant to the 40 CFR 136 unless an alternative method has been approved in writing pursuant to 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 Table A. 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.

<u>Parameter</u>	<u>Minimum Level</u>
Arsenic	5.0 ug/L
Cadmium	0.5 ug/L
Chlorine, total residual	20.0 ug/L
Chromium	5.0 ug/L
Copper	5.0 ug/L
Lead	5.0 ug/L
Nickel	5.0 ug/L
Zinc	10.0 ug/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, 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, total alkalinity, total hardness, and total residual chlorine 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 Chlorine 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.
  - (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 Daphnia pulex (less than 24-hours old)
- (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 Pimephales promelas (1-14 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) Organisms shall not be fed during the tests.
  - (c) Copper nitrate shall be used as the reference toxicant in tests with freshwater organisms.
  - (d) Synthetic freshwater prepared with deionized water adjusted to a hardness of 50 mg/L (plus or minus 5 mg/L) as CaCO<sub>3</sub> shall be used as dilution water in tests with freshwater organisms.
- (5) Compliance with limits on Aquatic Toxicity shall be determined as follows:
- (a) For limits expressed as a minimum LC<sub>50</sub> value, compliance shall be demonstrated when the results of a valid definitive Aquatic Toxicity test indicates that the LC<sub>50</sub> value for the test is greater than the Aquatic Toxicity Limit.
  - (b) For limits expressed as an NOAEL value, compliance shall be demonstrated when the results of a valid pass/fail Aquatic Toxicity test indicates there is greater than 50% survival in the undiluted effluent and 90% or greater survival in the effluent at the specified CTC.
- (C) The Permittee shall annually monitor the chronic toxicity of the DSN 001-1 in accordance with the following specifications.
- (1) Chronic toxicity testing of the discharge shall be conducted annually during July, August, or September of each year. During a period when the stream flow in the Naugatuck River is at or below 400 cfs as measured at the U.S.G.S. gauging station 01208500 located in Beacons Falls, Connecticut.
  - (2) Chronic toxicity testing shall be performed on the discharge in accordance with the test methodology established in "Short term Methods For Estimating The Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms" (EPA-821-R-02-013) as referenced in 40 CFR 136 for Cerio daphnia survival and reproduction and Fathead Minnow larval survival and growth.
  - (3) Chronic toxicity tests shall utilize a minimum of five effluent dilutions prepared using a dilution factor of 0.5 (100% effluent, 50% effluent, 25 % effluent, 12.5 % effluent, 6.25 % effluent, 0 % effluent).
  - (4) Naugatuck River water collected immediately upstream of the area influenced by the discharge shall be used as site water control (0% effluent) and dilution water in the toxicity tests.
  - (5) A laboratory water control consisting of synthetic freshwater prepared in accordance with EPA-821-R-02-013 at a hardness of 50±5 mg/l shall be included in the test protocol in addition to the site-water control.
  - (6) Daily composite samples of the discharge and grab samples of the Naugatuck River for use as site water control and dilution water shall be collected on: day 0, for test solution renewal on day 1 and day 2 of the test; day 2, for test solution renewal on day 3 and day 4 of the test; and day 4, for test solution renewal on day 5, 6, and 7 of the test. Samples shall not be dechlorinated, pH or hardness adjusted, or chemically altered in any way.
  - (7) All samples of the discharge and the Naugatuck River water used in the chronic toxicity test shall, at a minimum, be analyzed and results reported in accordance with the provisions listed in Section 6(A) of this permit for the following parameters:

pH	Copper (Total recoverable and dissolved)
Hardness	Nickel (Total recoverable and dissolved)
Alkalinity	Nitrogen, Ammonia (total as N)

Conductivity	Nitrogen, Nitrate (Total as N)
Chlorine, (Total residual)	Nitrogen, Nitrite (Total as N)
Solids, Total Suspended	Lead, (Total recoverable and dissolved)
Zinc, (Total recoverable and dissolved)	

**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. 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 30 consecutive operating days prior to sample collection if compliance with a limit on Aquatic Toxicity is based on toxicity limits based on actual flows described in Section 7, 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) For any table above that requires Total Toxic Organics (TTO) monitoring, the Permittee may, in lieu of analyzing for Total Toxic Organics, include a statement on the DMR, at the frequency required, certifying compliance with your Solvent Management Plan if such plan has been approved by the Commissioner in accordance with 22a-430-4(l) of the RCSA. If such approval has been granted and the reports include the compliance statement, the minimum frequency of sampling shall be reduced to annually in the month of January.

**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: Water Permitting and Enforcement Division) 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 8/15/2011

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Daniel C. Esty  
Commissioner  
Department of Energy and Environmental Protection