NPDES PERMIT

issued to

Hartford Steam Company
P.O. Box 150401
Hartford, CT 06115

Locati on Address:
Hartford Steam Company
60 Columbus Boulevard
Hartford, CT 06115

Facility ID: 064-038

Permit ID: CT0004014

Receiving Stream: Park River and Connecticut River

Permit Expires: August 23, 2011

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) Hartford Steam 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.

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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. 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 July.

"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”.

"No Observable Acute Effect Level (NOAEL)" means any concentration equal to or less than the critical test concentration in a single concentration (pass/fail) toxicity test conducted pursuant to section 22a-430-3(j)(7)(A)(i) RCSA demonstrating 90% or greater survival of test organisms at the CTC.

"Quarterly", in the context of a sampling frequency, means sampling is required in the months of January, April, July, and October.

“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.

"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.

"Semi-Annual" in the context of a sampling frequency, means the sample must be collected in the months of January and July.

"Twice per Month" when used as a sample frequency shall mean two samples per calendar month collected no less than 12 days apart.

"ug/l" means micrograms per liter.

SECTION 3: COMMISSIONER'S DECISION

(A) The Commissioner of Environmental Protection ("Commissioner"), has issued a final determination and found that modification of the existing system or installation of a new system would protect the waters of the state from pollution. The Commissioner's decision is based on A**pplication No. 200300292** for permit reissuance received on January 30, 2003 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 her 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.

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^{o}F, or, in any case, raise the normal temperature of the receiving stream beyond any zone of influence specifically allocated to that discharge in this permit more than 4^{o}F.

(D) The discharge and operation of all facilities shall not alter significantly the turbidity, taste, odor, or levels of coliform bacteria from ambient levels in the receiving waters nor shall the level of dissolved oxygen in the receiving waters fall below 5.0 mg/l as a result of such discharge, as provided in the "Connecticut Water Quality Standards & Criteria" as amended.

(E) The maximum instantaneous temperature increase at DSN-001's outlet above the intake water temperature shall be 40 ^{o}F for the period beginning May 1 and ending October 31.The maximum instantaneous temperature increase shall be 32 ^{o}F for the period beginning November 1 and ending April 30. In the event the temperature differential exceeds the above limits for a period exceeding 24 hours, the Department of Environmental Protection shall be notified within 2 hours and a written report filed within 5 days. The report shall describe the reasons for the exceedance, any environmental impact which may have been caused by such exceedance and

proposed steps to be taken to prevent such problems in the future.

(F) The thermal plume allowed within the permissible mixing zone, as defined by these conditions, shall not block zones of fish passage.

SECTION 5: SPECIFIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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

Table A

Discharge Serial Number: 001A | **Monitoring Location:** 1

Wastewater Description: Non-contact cooling water | **Receiving Stream:** Park River

Monitoring Location Description: Sample shall be taken from the West (001A) discharge outfall pipe prior to exiting the building.

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test[3]
		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	
Aquatic Toxicity, Ceriodaphnia dubia[5]	%	NA	NOAEL=100	Semi-Annual	Daily Composite	NA	NR	NA	
Aquatic Toxicity, Pimephales promelas[5]	%	NA	NOAEL=100	Semi-Annual	Daily Composite	NA	NR	NA	
Aquatic Toxicity, Daphnia pulex[6]	%	NA	NA	NR	NA	NOAEL=100	NR	Grab	
Aquatic Toxicity, Pimephales promelas[6]	%	NA	NA	NR	NA	NOAEL=100	NR	Grab	
Copper, Total [4]	mg/l	NA	----	Monthly	Daily Composite	NA	NR	NA	*
Flow, Average and Maximum [1]	mgd	39.0	43.0	Daily	See remarks	NA	NR	NA	
Iron, Total [4]	mg/l	NA	----	Monthly	Daily Composite	NA	NR	NA	
Lead, Total [4]	mg/l	NA	----	Monthly	Daily Composite	NA	NR	NA	*
Chlorine, Total Residual [4]	mg/l	NA	NA	NR	NA	----	Semi-Annual	Grab	*
pH	S.U.	NA	NA	NR	NA	6.0 – 9.0	Monthly	RDS	
pH Continuous	S.U.	NA	NA	NR	NA	6.0 – 9.0	Continuous/ Monthly	RDM	
Suspended Solids, Total [4]	mg/l	NA	----	Monthly	Daily Composite	NA	NR	NA	
Temperature	^{0}F	NA	NA	NR	NA	----	Continuous	Instantaneous	
Temp. Difference (May 1 – October 31)	^{0}F	NA	NA	NR	NA	See remarks[7]	Continuous	Instantaneous	
Temp. Difference (Nov. 1 – April 30)	^{0}F	NA	NA	NR	NA	See remarks[7]	Continuous	Instantaneous	
Zinc, Total [4]	mg/l	NA	----	Monthly	Daily Composite	NA	NR	NA	*

Remarks:

[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 Average Daily Flow and the Maximum Daily Flow for each month.

[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] Minimum Level Test refers to Section 6 Paragraph 3 of this permit.

[4] Indicates that testing for this parameter shall be performed on the same sample used for aquatic toxicity testing.

[5] Compliance with this permit limit will be based on the first 48 hours of a valid chronic test, see Section 6 (C) (7).

[6] Compliance with this permit limit will be based on Section 6(B).

[7] Compliance with this permit limit will be based on Section 4 (C), (E) and (F).

[8] The results of the Toxicity Tests are recorded in % survival, however the permittee shall report pass/fail on the DMR.

Table B

Discharge Serial Number: 001B | **Monitoring Location:** 1

Wastewater Description: Non-contact Cooling Water | **Receiving Stream:** Park River

Monitoring Location Description: Sample shall be taken from the East (001B) discharge outfall pipe prior to exiting the building.

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test[3]
		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	
Aquatic Toxicity, Ceriodaphnia dubia[5]	%	NA	NOAEL= 100%	Semi-Annual	Daily Composite	NA	NR	NA	
Aquatic Toxicity, Pimephales promelas[5]	%	NA	NOAEL= 100%	Semi-Annual	Daily Composite	NA	NR	NA	
Aquatic Toxicity, Daphnia pulex[6]	%	NA	NA	NR	NA	NOAEL=100	NR	Grab	
Aquatic Toxicity, Pimephales promelas[6]	%	NA	NA	NR	NA	NOAEL=100	NR	Grab	
Copper, Total[4]	mg/l	NA	----	Monthly	Daily Composite	NA	NR	NA	*
Flow, Average and Maximum [1]	mgd	16.0	19.0	Daily	See remarks	NA	NR	NA	
Iron, Total[4]	mg/l	NA	----	Monthly	Daily Composite	NA	NR	NA	
Lead, Total[4]	mg/l	NA	----	Monthly	Daily Composite	NA	NR	NA	*
Chlorine, Total Residual[4]	mg/l	NA	NA	NR	NA	NA	Semi-Annual	Grab	*
pH	S.U.	NA	NA	NR	NA	6.0 – 9.0	Monthly	RDS	
pH Continuous	S.U.	NA	NA	NR	NA	6.0 – 9.0	Continuous /Monthly	RDM	
Suspended Solids, Total[4]	mg/l	NA	----	Monthly	Daily Composite	NA	NR	NA	
Temperature	^{0}F	NA	NA	NR	NA	----	Continuous	Instantaneous	
Temp. Difference (May 1 – October 31)	^{0}F	NA	NA	NR	NA	See remarks[7]	Continuous	Instantaneous	
Temp. Difference (Nov. 1 – April 30)	^{0}F	NA	NA	NR	NA	See remarks[7]	Continuous	Instantaneous	
Zinc, Total[4]	mg/l	NA	----	Monthly	Daily Composite	NA	NR	NA	*

Remarks:

[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 Average Daily Flow and the Maximum Daily Flow for each month.

[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] Minimum Level Test refers to Section 6 Paragraph 3 of this permit.

[4] Indicates that testing for this parameter shall be performed on the same sample used for aquatic toxicity testing.

[5] Compliance with this permit limit will be based on the first 48 hours of a valid chronic test, see Section 6 (C)(7).

[6]Compliance with this permit limit will be based on Section 6(B).

[7]Compliance with this permit limit will be based on Section 4 (C), (E) and (F).

[8]The results of the Toxicity Tests are recorded in % survival, however, the permittee shall report pass/fail on the DMR.

Table C

Discharge Serial Number: 001C | **Monitoring Location:** 7

Wastewater Description: Connecticut River Intake | **Intake Stream:** Connecticut River

Monitoring Location Description: Samples for chemical parameters shall be taken as river waters enter the intake structure prior water pumps and rotating water screens.Temperature shall be metered at manhole by the main plant designated as RWT-01.

Average Intake Flow: 55,000.000 gallons per day[1] | **Maximum Intake Flow:** 62,000,000 gallons per day[1]

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test[3]
		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	
Aquatic Toxicity, Ceriodaphnia dubia[5]	%	NA	NA	NR	NA	-----	Semi-Annually	Grab	
Aquatic Toxicity, Pimphales promelas[5]	%	NA	NA	NR	NA	-----	Semi-Annually	Grab	
Copper, Total [4]	mg/l	NA	NA	NR	NA	-----	Monthly	Grab	*
Iron, Total [4]	mg/l	NA	NA	NR	NA	-----	Monthly	Grab	
Lead, Total [4]	mg/l	NA	NA	NR	NA	-----	Monthly	Grab	*
Chlorine Residual, Total [4]	mg/l	NA	NA	NR	NA	-----	Monthly	Grab	*
pH	s.u.	NA	NA	NR	NA	6.0-9.0	Monthly	RDS	
Suspended Solids, Total [4]	mg/L	NA	NA	NR	NA	-----	Monthly	Grab	
Temperature	^{0}F	NA	NA	NR	NA	-----	Continuous	Instantaneous	
Zinc, Total [4]	mg/l	NA	NA	NR	NA	-----	Monthly	Grab	*

Remarks:

[1] For this parameter the permittee shall maintain at the facility a record of the total flow for each day of water supply and shall report the Average Intake Flow and the Maximum Intake Flow for each month

[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] Minimum Level Test refers to Section 6 Paragraph 3 of this permit.

[4] Indicates that testing for this parameter shall be performed on the same sample used for aquatic toxicity testing.

[5] Compliance with this permit limit will be based on the first 48 hours. of a valid chronic test, see Section 6 (C)(7) .

[6]The results of the Toxicity Tests are recorded in % survival, however, the permittee shall report pass/fail on the DMR.

Table D

Discharge Serial Number: 003-1 | **Monitoring Location**: 1

Wastewater Description: Traveling screen rinse water

Monitoring Location Description: Sample shall be taken from the traveling screen outfall pipe.

Receiving Stream: Connecticut River

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test
		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	
Suspended Solids, Total	mg/L	NA	NA	NR	NA	-----	Annually	Grab	
Flow, Average and Maximum [1]	gpd	100,400	196,000	Daily	See remarks	NA	NR	NA	

Remarks:

[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 Average Daily Flow and the Maximum Daily Flow for each month.

[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'.

(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 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 Code of Federal Regulations, Part 136 of title 40 (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(s) A, B, and C. 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
Chlorine, total residual	20.0 ug/L
Copper	5.0 ug/L
Lead	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 (Grab samples only)

(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) Grab samples shall be chilled 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 Table(s) A, B, and C 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 24 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).

(3) 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) For Aquatic Toxicity Limits and for, expressed as an NOAEL value, Pass/Fail (single-concentration) tests shall be conducted at a specified Critical Test Concentration (CTC) equal to the Aquatic Toxicity Limit, or 100%, as prescribed in section 22A-430-3(j)(7)(A)(i) of the Regulations of Connecticut State Agencies.

(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 CaCO3 shall be used as dilution water in tests with freshwater organisms.

(C) The permittee shall conduct semi-annual chronic toxicity tests of DSN001A, B and C in accordance with the following specifications.

(1) Chronic toxicity testing of the discharges shall be conducted two times per year. Representative samples of the respective effluents shall be collected in July and October.

(2) Single concentration, static renewal chronic toxicity tests 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 40CFR 136 for Ceriodaphnia survival and reproduction and Fathead Minnow larval survival and growth.

(3) Composites samples of discharges DSN 001A, B and C, and grab samples of Connecticut River water collected outside the influence of DSNs 001A, B and C for use as control water shall be collected on day 0, day 2, and day 4 of the test. Chronic toxicity analyses shall also be performed on a laboratory water control sample. Samples shall not be dechlorinated, pH or hardness adjusted, or chemically altered in any way.

(4) Test solutions shall be renewed daily. Sample 1 shall be used for days 1 and 2 of the test, sample 2 shall be used for days 3 and 4, and sample 3 shall be used for the remainder of the test. In no case shall samples of DSN 001A, B and C or control water be held longer than 24 hours prior to their first use as of test solutions.

(5) All samples of the discharge and the Connecticut 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	Lead, (Total recoverable and dissolved)
Alkalinity	Nickel (Total recoverable and dissolved)
Conductivity	Zinc, (Total recoverable and dissolved)
Chlorine, (Total residual)	Iron, Total
Nitrogen, Ammonia (Total as N)	Solids, Total Suspended
Nitrogen, Nitrite (Total as N)	Nitrogen, Nitrate (Total as N)
Aluminum, Total	

(6) A reference toxicant test shall be conducted with each chronic toxicity monitoring test using sodium chloride with an acute LC50 as the endpoint.

(7) Compliance with the Maximum Daily aquatic toxicity limit specified in Section 5 Tables A, B, and C shall be demonstrated when the 48 hour results of a valid chronic toxicity test in which control test organism survival exceeds 80% for all replicates combined and the discharge(s) demonstrate(s) no significant increase in mortality of the test organisms exposed to the discharge in comparison to those exposed to the control water as indicated by a one tailed test at an alpha level of 0.05.

(8) If any chronic toxicity result indicates a significant increase in mortality of test organisms between samples of DSN 001A, B and C and the control at the completion of the test, the permittee shall notify the Department and submit to the Department within 30 days of conclusion of the test a brief summary of test results. This summary shall include at a minimum, percent survival in each replicate test

chamber and all supporting chemical and physical measurements performed in association with the toxicity test.

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 Water Management (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 folloving the month in which samples are collected.

Bureau of Water Management (Attn: DMR Processing)
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

(B) Complete an accurate aquatic toxicity test data, including percent survival of test organisms in each replicate test chamber, LOEC and NOEC for survival, growth and/or reproduction and all supporting chemical/physical measurements performed in association with any aquatic toxicity test, including measured daily flow and hours of operation for the days of sample collection, shall be entered on the Aquatic Toxicity Monitoring Report form (ATMR) and sent to the Bureau of Water Management at the following address. The ATMR shall be received at this address within 60 days of test completion.

Bureau of Water Management (Attn: Aquatic Toxicity)
Connecticut Department of 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.

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 toxicity, 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 Water Management (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 Water Management (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 Water Management, 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.

SECTION 9: COMPLIANCE SCHEDULE

(A) The Permittee shall conduct a study to verify that the discharges are consistent with Connecticut Water Quality Standards and do not result in impairment of designated uses in the Park River and/or Connecticut River. The study shall include the results of an investigation into potential sources of copper and zinc and identify specific measures being implemented by the Permittee to insure that copper and zinc contributed to the discharge by these sources do not result in excursions above water quality criteria applicable to the Park and Connecticut rivers.

(1) On or before 60 days after the date of issuance of this permit, the Permittee shall retain one or more qualified consultants acceptable to the Commissioner to prepare the documents and implement or oversee the actions required by this section of the permit and shall, by that date, notify the Commissioner in writing of the identity of such consultants. The Permittee shall retain one or more qualified consultants acceptable to the Commissioner until the actions required by this section of the permit have been completed, and within ten days after retaining any consultant other than one originally identified under this paragraph, Permittee shall notify the Commissioner in writing of the identity of such other consultant. The consultant retained to perform the studies and oversee any remedial measures shall be a qualified professional engineer licensed to practice in Connecticut acceptable to the Commissioner. The Permittee shall submit to the Commissioner a description of a consultant's education, experience and training that is relevant to the work required by this permit within ten days after a request for such a description. Nothing in this paragraph shall preclude the Commissioner from finding a previously acceptable consultant unacceptable.

(2) On or before 120 days after the date of issuance of this permit, the permittee shall submit for the Commissioner's review and written approval a scope of study for an investigation of the impact of discharges on the water quality of the Park and Connecticut Rivers. A sufficient number of sampling locations shall be selected including, but not limited to, at the mouth of the Park River in the north and south conduits just before entering the Connecticut River, upstream of their discharges in the Park River, and in the Connecticut River upstream of the confluence of the two rivers. Analysis of surface water samples should include but not be limited to copper, zinc, lead, aluminum, iron, total suspended solids, temperature and chronic toxicity. Temperature data should be collected on an ongoing basis (e. g. 15 or 30 minute intervals using temperature data loggers). The scope of study shall include a requirement to characterize the aquatic life community in the Park River and nearby Connecticut River. Fish species shall be limited to the species found in either the North or South conduits. Inverterbrate species shall include a list of inverterbrates and their relative abundance found in the North and South conduits of the Park River and the Western bank of the Connecticut River upstream of the confluence.

(3) On or before 545 days after the date of issuance of this permit, the Permittee shall submit for the Commissioner's review and written approval a comprehensive and thorough report that describes and evaluates alternative actions which may be taken by the Permittee to insure continuous compliance with the Connecticut Water Quality Standards and Criteria. Such report shall:

(a) Identify and evaluate alternative actions needed to maintain consistency with the Connecticut Water Quality Standards and Criteria including, but not limited to, the conduct of use attainability analysis, development of site-specific criteria, pollutant source reduction, pollutant source reduction, process changes/innovations, chemical substitutions, recycle and zero discharge systems, water conservation measures, and other internal and/or end-of-pipe treatment technologies, including relocation of the discharge outfall (e. g. locations in the

Connecticut River);

(b) state in detail the most expeditious schedule for performing each alternative;

(c) list all permits and approvals required for each alternative, including but not limited to any permits required under sections 22a-32, 22a-42a, 22a-342, 22a-361, 22a-368 or 22a-430 of the Connecticut General Statutes;

(d) propose a preferred alternative or combination of alternatives with supporting justification; and

(e) propose a detailed program and schedule to perform all actions required by the preferred alternative including but not limited to a schedule for submission of engineering plans and specifications on any internal and/or end of pipe treatment facilities, start and completion of any construction activities related to any treatment facilities, and applying for and obtaining all permits and approvals required for such actions.

(B) The Permittee shall conduct a study to assess the effect of their facility's water intake system on the fisheries resources of the Connecticut River and propose remedial actions to minimize impact.

(1) On or before 60 days after the date of issuance of this permit, the Permittee shall retain one or more qualified consultants acceptable to the Commissioner to prepare the documents and implement or oversee the actions required by this section of the permit and shall, by that date, notify the Commissioner in writing of the identity of such consultants. The Permittee shall retain one or more qualified consultants acceptable to the Commissioner until the actions required by this section of the permit have been completed, and within ten days after retaining any consultant other than one originally identified under this paragraph, Permittee shall notify the Commissioner in writing of the identity of such other consultant. The consultant retained to perform the studies and oversee any remedial measures shall be a qualified professional engineer licensed to practice in Connecticut acceptable to the Commissioner. The Permittee shall submit to the Commissioner a description of a consultant's education, experience and training that is relevant to the work required by this permit within ten days after a request for such a description. Nothing in this paragraph shall preclude the Commissioner from finding a previously acceptable consultant unacceptable.

(2) On or before 180 days after the date of permit issuance, the permittee shall submit for the Commissioner's review and written approval a scope of study for performing a one year impingement study and a two year entrainment monitoring and evaluation of the intake structure. The scope of study shall provide all of the necessary details associated with the experimental design and include a schedule that identifies the study initiation and completion dates. A scheduled generating unit shut down shall not occur during entrainment monitoring and evaluation of the intake structure.

(3) The permittee shall perform the actions in the approved scope of study described in paragraph 9(B)(2) in accordance with the approved schedule(s), but in no event shall the actions be completed by later than thirty three (33) months after the date of approval of such scope of study.

(4) Within three years after approval of the scope of study described in paragraph 9(B)(2) above, the permittee shall submit for the Commissioner's review and written approval a comprehensive and thorough report on the findings of the impingement study and entrainment monitoring and evaluation conducted. The report shall include recommendations to modify current intake practices and design, including but not limited to modification of the fish return system, if warranted based on the results of the impingement study and entrainment monitoring and evaluation. The report shall also include a detailed schedule identifying when all appropriate recommendations will be implemented at the facility.

(5) After completing one year of entrainment monitoring, the permittee may submit in writing to the Commissioner a request to consider the entrainment study complete. In making such request, the required report and data associated with the first year of entrainment sampling must also be submitted for the review and written approval of the Commissioner, as well as a detailed narrative describing the rational for such request. The Commissioner may either approve or deny such request.

(C) The Permittee shall submit to the Commissioner quarterly status reports beginning sixty days after the date of approval of the report referenced in Section 9(A)(3) and 9(B)(4) above. Status reports shall include, but not be limited to, a summary of all monitoring data collected by the Permittee during the previous 90 day period and a detailed description of progress made by the Permittee in performing actions required by this section of the permit in accordance with the approved schedule including, but not limited to, development of engineering plans and specifications, construction activity, contract bidding, operational changes, preparation and submittal of permit applications, and any other actions specified in the program approved pursuant to paragraph (A)(3) of this section.

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(D) The Permittee shall perform the approved actions in accordance with the approved schedules, but in no event shall the approved actions be completed later than 1,260 days after the date of issuance of this permit. Within fifteen days after completing such actions, the Permittee shall certify to the Commissioner in writing that the actions have been completed as approved.

(E) The Permittee shall use best efforts to submit to the Commissioner all documents required by this section of the permit in a complete and approvable form. If the Commissioner notified the Permittee that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and the Permittee shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within thirty days of the Commissioner's notice of deficiencies. In approving any document or other action under this Compliance Schedule, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this section of the permit. Nothing in this paragraph shall excuse noncompliance or delay.

(F) Dates. The date of submission to the Commissioner of any document required by this section of the permit shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this section of the permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" as used in this section of the permit means calendar day. Any document or action which is required by this section only of the permit, to be submitted, or performed, by a date which falls on, Saturday, Sunday, or, a Connecticut or federal holiday, shall be submitted or performed on or before the next day which is not a Saturday, Sunday, or Connecticut or federal holiday.

(G) Notification of noncompliance. In the event that the Permittee becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this section of the permit or of any document required hereunder, the Permittee shall immediately notify the Commissioner and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. In so notifying the Commissioner, the Permittee shall state in writing the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and the Permittee shall comply with any dates that may be approved in writing by the Commissioner. Notification by the Permittee shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.

(H) Notice to Commissioner of changes. Within fifteen days of the date the Permittee becomes aware of a change in any information submitted to the Commissioner under this section of the permit, or that any such information was inaccurate or misleading or that any relevant information was omitted, the Permittee shall submit the correct or omitted information to the Commissioner.

(I) Submission of documents. Any document, other than a discharge monitoring report, required to be submitted to the Commissioner under this section of the permit shall, unless otherwise specified in writing by the Commissioner, be directed to:

Kim Kisilis
Department of Environmental Protection
Bureau of Water Management
79 Elm Street
Hartford, CT 06106-5127

This permit is hereby issued on 8/24/06.

/s/GINA MCCARTHY
Gina McCarthy
Commissioner

GM/kk

DATA TRACKING AND TECHNICAL FACT SHEET

Permittee: The Hartford Steam Company

PERMIT, ADDRESS, AND FACILITY DATA

PERMIT #: CT0004014 APPLICATION #: 200300292 FACILITY ID. 064-038

Mailing Address:						**Location Address:**					
Street:	P.O. Box 150401					**Street:**	60 Columbus Boulevard				
City:	Hartford	**ST:**	**CT**	**Zip:**	06115	**City:**	Hartford	**ST:**	**CT**	**Zip:**	06115
Contact Name:	James G. Elsner					DMR Contact	James G. Elsner				
Phone No.:	(860) 548-7346					**Phone No.:**	(860) 548-7346				

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) __X__
NPDES SIGNIFICANT MINOR or PRETREAT SIU (SI) _____
NPDES or PRETREATMENT MINOR (MI) _____

PRETREAT SIGNIFICANT INDUS USER (SIU) _____
PRETREAT CATEGORICAL (CIU) _____
Note: If it's a CIU then check off SIU

POLLUTION PREVENTION MANDATE _ ENVIRONMENTAL EQUITY ISSUE ____

COMPLIANCE ISSUES

COMPLIANCE SCHEDULE X YES NO (If yes check off what it is in relation to.)

POLLUTION PREVENTION X TREATMENT REQUIREMENT____WATER CONSERVATION

WATER QUALITY REQUIREMENT X 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 ____

DEP STAFF ENGINEER: Kim Kisilis

PERMIT FEES

Discharge Code	DSN	Annual Fee
102000C	001A&B	$8,175.00
102000N	003	$525.00

FOR NPDES DISCHARGES

Drainage basin Code: Connecticut River (4000) via Park River (4400)
Present/Future Water Quality Standard: Connecticut River - C/B, Park River – C/B

NATURE OF BUSINESS GENERATING DISCHARGE

The facility supplies steam and chilled water for heating and cooling purposes to approximately seventy buildings in Hartford, Connecticut.

PROCESS AND TREATMENT DESCRIPTION (by DSN)

DSN 001 A&B: Non-contact cooling water associated with steam generation process.
DSN 003: Wastewater from the rinsing of the traveling screen on the water intake from the Connecticut River.

RESOURCES USED TO DRAFT PERMIT

__ Federal Effluent Limitation Guideline 40CFR _____
name of category

__ Performance Standards

__ Federal Development Document
name of category

__ Treatability Manual

X Department File Information

X Connecticut Water Quality Standards

__ Anti-degradation Policy

__ Coastal Management Consistency Review Form

X Other - Explain

BASIS FOR LIMITATIONS, STANDARDS OR CONDITIONS

X Best Professional Judgment (See Other Comments)

X Case-by-Case Determination (See Other Comments)

X In order to meet in-stream water quality (See General Comments)
_ Anti-degradation policy

GENERAL COMMENTS

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). Relevant discharge data were not available for evaluation of consistency with the available aquatic life criteria (acute and chronic) and human health (fish consumption only) criteria. A review of monitoring data for similar facilities with considerable available dilution generally do not require water quality based limitations. A monitoring requirement was included in this permit to develop the data necessary to confirm that water quality-based limitations are not required.

OTHER COMMENTS

Due to the unique physical characteristics of the Park River at the outfall location, a study has been required to verify that the discharges are consistent with Connecticut Water Quality Standards at their current locations. Hartford Steam Company must verify that its current effluent quality will not cause harm to organisms living in the Park River beyond the zone of influence. Hartford Steam Company must identify fish species and other organisms currently present in the north and south conduits and verify that the level of copper and zinc present in the discharge do not inhibit the growth, or survival of such species.

A Case by Case Determination using the criteria of Best Professional Judgment was used to evaluate these wastewater discharges and intake water.

DSN 001A and DSN 001B

In order to improve monitoring accuracy and provide more data for the future evaluations, DSN001 (Table A) in previous permit was replaced with DSN 001A (Table A, West discharge) and DSN 001B (Table B, East discharge) in this permit. Grab sample monitoring for aquatic toxicity and metals in previous permit were replaced with Daily Composite monitoring. Also, iron and total suspended solids monitoring were added in this permit.

DSN 001C (Connecticut River Intake)

In order to provide more data for the future evaluation, aquatic toxicity, iron and total suspended solids monitoring were added to this permit.

DSN 003 (Traveling screen rinse water)

This discharge does not require any treatment. Monitoring for total suspended solids and flow are required in the permit.