



National Pollutant Discharge Elimination System Permit

issued to

Name:

Ahlstrom Nonwovens LLC
2 Elm Street,
Windsor Locks, CT 06096

Location Address:

Ahlstrom Nonwovens LLC
26 Canal Bank Road
Windsor Locks, CT 06096

Permit Number: CT0000434

Effective Date:

Receiving Waterbodies:

Connecticut River, Windsor Locks Canal,
and Kettle Brook

Issuance Date:

Waterbodies IDs:

CT4000-00_03 and CT4000-09_01

Permit Expires: [5 years after effective date]

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 NPDES permit program.
- (B) **Ahlstrom Nonwovens LLC**, ("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 June.

"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.

"Composite Sample" means a sample collected over a specified period of time in order that the results are representative of the monitored activity over the same time period.

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

"Daily composite" means (1) a composite sample taken over a full operating day consisting of grab samples collected at equal intervals of no more than sixty (60) minutes and combined proportionally to flow, or (2) a composite sample continuously collected over a full operating day proportionally to flow.

"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.

"Grab Sample Average (GSA)" means the arithmetic average of all grab sample analyses. Grab samples shall be collected at least once every four hours over a full operating day for as long as a discharge exists on that day (minimum of two grab samples per 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 greater than 50% survival of test organisms in 100% (undiluted) effluent and 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 March, June, September and December.

"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 the sample must be collected in the months of June and December.

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

"µg/l" means micrograms per liter.

SECTION 3: COMMISSIONER'S DECISION

- (A) The Commissioner of the Connecticut Department of Energy and Environmental Protection (“Commissioner”) has issued a final determination and found that; 1) for DSN 008 and internal wastestream DSN 08F, continuance of the existing system to treat the discharge would protect the waters of the state from pollution, and 2) for DSN 013, DSN 014, DSN 015, continuance of the existing discharges would not cause pollution of the waters state. The Commissioner’s decision is based on Application No. 201402656 for permit reissuance received on March 26, 2014, and the administrative record established in the processing of that application.
- (B) Beginning from the effective date 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. 201402656 received by the Department of Energy and Environment Protection (“DEEP”) on March 26, 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.
- (D) This permit includes a determination 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), 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. Based on the evaluation detailed in the fact sheet, DEEP has determined that the facility employs BTA pursuant to 40 CFR § 125.90(b).
- (E) Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.

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 beyond the approved zone of influence.
- (D) There shall be no discharge of polychlorinated biphenyl (PCB) compounds such as those commonly used for transformer fluid.

SECTION 5: SPECIFIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- (A) The discharge is restricted by and shall be monitored in accordance with the following tables in this section. The wastewater discharge shall not exceed the effluent limitations in these tables and shall otherwise conform to the specific terms and conditions listed in the tables. The permittee shall comply with the “Remarks” and “Footnotes” noted in the tables that follow. Such remarks and footnotes are enforceable like any other term or condition of this permit.
- (B) All samples shall be comprised of only the wastewater described in the below tables. Samples shall be collected prior to combination with receiving waters or wastewater of any other type, and after all approved treatment units, if applicable. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Collection of permit required effluent samples in any location other than the authorized location noted in this permit shall be a violation of this permit.
- (C) 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 DEEP personnel, the Permittee, or other parties.
- (D) Sampling at the internal waste streams (DSN 08A, 08B, 08C, 08D, 08E and 08F) at the specified frequencies, shall coincide with the sampling at the final outfall (DSN 008-1).

Table A

Discharge Serial Number: 008-1						Monitoring Location: 1			
Wastewater Description: Combined discharge of NCCW (DSNs 08A, 08B, 08C, 08D and 08E) and krofta dissolved flotation clarifier effluent (DSN 08F) to the Connecticut River									
Monitoring Location Description: Discharge pipe after mixing of all internal waste streams						In Stream Waste Concentration (IWC): 2.1%			
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	
Aluminum, Total	mg/l	NA	---	Monthly	Daily Composite	NA	NR	NA	✓
Aquatic Toxicity, Daphnia pulex LC ₅₀ ⁴	%	NA	≥ 42	Quarterly	Daily Composite	NA	NR	NA	
Aquatic Toxicity, Pimephales promelas LC ₅₀ ⁴	%	NA	≥ 42	Quarterly	Daily Composite	NA	NR	NA	
Biochemical Oxygen Demand (5-day)	mg/l	---	---	Twice per month	Daily Composite	NA	NR	NA	
Bromine	mg/l	NA	---	Quarterly	Grab Sample Average	NA	NR	NA	
Chronic Aquatic Toxicity (Survival) Ceriodaphnia dubia ⁵	%	NA	---	Semi-annually ⁶	Daily Composite	NA	NR	NA	
Chronic Aquatic Toxicity (Reproduction) Ceriodaphnia dubia ⁵	%	NA	---	Semi-annually ⁶	Daily Composite	NA	NR	NA	
Chronic Aquatic Toxicity (Survival) Pimephales promelas ⁵	%	NA	---	Semi-annually ⁶	Daily Composite	NA	NR	NA	
Chronic Aquatic Toxicity (Growth) Pimephales promelas ⁵	%	NA	---	Semi-annually ⁶	Daily Composite	NA	NR	NA	
Copper, Total	mg/l	NA	---	Monthly	Daily Composite	NA	NR	NA	✓
Dissolved Oxygen	mg/l	---	≥ 5.0	Weekly	Grab Sample Average	NA	NR	NA	
Epichlorohydrin	mg/l	NA	---	Monthly	Grab Sample Average	NA	NR	NA	✓
Flow Rate (Average Daily) ¹	MGD	6.0	NA	Daily	Total Daily Flow	NA	NR	NA	
Flow, Maximum during 24 hr period ¹	MGD	NA	9.0	Daily	Total Daily Flow	NA	NR	NA	
Flow (Day of Sampling)	MGD	NA	9.0	Weekly	Daily Flow	NA	NR	NA	
Iron, Total	mg/l	NA	---	Monthly	Daily Composite	NA	NR	NA	
Lead, Total	mg/l	NA	---	Monthly	Daily Composite	NA	NR	NA	✓
Manganese, Total	mg/l	NA	---	Semi-annual	Daily Composite	NA	NR	NA	
Nickel, Total	mg/l	NA	---	Monthly	Daily Composite	NA	NR	NA	✓
Nitrogen, Ammonia, (total as N)	mg/l	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Nitrogen, Nitrite (total as N)	mg/l	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Nitrogen, Nitrate (total as N)	mg/l	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Nitrogen, Total	mg/l	NA	---	Quarterly	Daily Composite	NA	NR	NA	
pH, Minimum	S.U.	NA	NA	NR	NA	6.0	Continuous	Continuous	
pH, Maximum	S.U.	NA	NA	NR	NA	9.0	Continuous	Continuous	
Phosphorus, Total	mg/l	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Surfactants (MBAs)	mg/l	---	---	Monthly	Daily Composite	NA	NR	NA	

Table A

Discharge Serial Number: 008-1						Monitoring Location: 1			
Wastewater Description: Combined discharge of NCCW (DSNs 08A, 08B, 08C, 08D and 08E) and krofta dissolved flotation clarifier effluent (DSN 08F) to the Connecticut River									
Monitoring Location Description: Discharge pipe after mixing of all internal waste streams						In Stream Waste Concentration (IWC): 2.1%			
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	
Temperature (April – July and September - November)	°F	NA	NA	NR	NA	110	Continuous	Continuous	
Temperature (August)	°F	NA	NA	NR	NA	115	Continuous	Continuous	
Temperature (December – March)	°F	NA	NA	NR	NA	95	Continuous	Continuous	
Total Suspended Solids	mg/l	---	---	Twice per month	Daily Composite	NA	NR	NA	
Total Residual Chlorine	µg/l	---	---	Weekly	Grab Sample Average	NA	NR	NA	✓
Zinc, Total	mg/l	NA	---	Monthly	Daily Composite	NA	NR	NA	✓

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 Average Daily Flow and the Maximum Daily Flow for each sampling 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 7 Paragraph (A)(3) of this permit.

⁴ See Section 8 of this permit.

⁵ Chronic toxicity testing will be conducted in accordance with Section 6(C) of this permit. The parameter Chronic Aquatic Toxicity, Ceriodaphnia dubia evaluates discharge quality for survival and reproduction and the parameter Chronic Aquatic Toxicity, Pimephales promelas evaluates discharge quality for survival and growth. The C-NOEC (Chronic-No Observed Effect Concentration) results (in %) for survival, growth and reproduction shall be reported on the DMR. In addition to the reporting requirements in Section 8 of the permit, the aquatic toxicity monitoring report (ATMR) shall be completed for each chronic toxicity testing event with the completed ATMR submitted as an attachment to the DMR. The following endpoints shall be reported on the ATMR: 48-hour LC50 (survival), 7-day LC50 (survival), 7-day C-NOEC (survival), 7-day C-LOEC (survival), 7-day C-NOEC (growth), 7-day C-LOEC (growth), 7-day C-NOEC (reproduction), 7-day C-LOEC (reproduction), 7-day EC50 (reproduction), 7-day EC50 (growth), 7-day IC25 (growth and reproduction).

⁶ Sampling shall be in June and September.

Remark:

a) The previously allocated zone of influence of 11,584,500 gph was carried forward.

Table B

Discharge Serial Number: 08A (Formerly DSN 001-1) **Monitoring Location:** IM

Wastewater Description: Non-contact cooling water from the North end of the site discharged to DSN 008-1

Monitoring Location Description: North Non-contact cooling water Tank

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	
Aluminum, Total	mg/l	NA	---	Semi-annual	Daily Composite ⁴	NA	NR	NA	✓
Flow Rate (Average Daily) ¹	Gpd	---	NA	Daily	Total Daily Flow	NA	NR	NA	
Flow, Maximum during 24 hr period ¹	Gpd	NA	---	Daily	Total Daily Flow	NA	NR	NA	
Flow (Day of Sampling)	Gpd	NA	---	Monthly	Total Daily Flow	NA	NR	NA	
pH	S.U.	NA	NA	NR	NA	---	Continuous	RDM	
Temperature	°F	NA	NA	NR	NA	---	Continuous	RDM	
Total Residual Chlorine	mg/l	NA	---	Semi-annual	Grab Sample Average	NA	NR	NA	✓
Zinc, Total ⁵	mg/l	NA	---	Per Event ⁶	Daily Composite ⁴	NA	NR	NA	✓

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 Average Daily Flow and the Maximum Daily Flow for each sampling 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 7(A)(3) of this permit.

⁴ 'Daily Composite' means a composite sample taken over a full operating day consisting of grab samples collected at equal intervals of no more than four (4) hours and combined proportionally to flow.

⁵ Testing only required under the special condition specified in the below Remarks.

⁶ An event shall be the same as the special condition described in the below Remarks.

Remarks:

1. Special Condition. In the event of a dual pump failure only, the Permittee is authorized to discharge the wastewaters described in this table into the Windsor Locks Canal. Furthermore, the Permittee is required to conduct monitoring of the overflow for all parameters as specified in this table.

Table C

Discharge Serial Number: 08B (Formerly DSN 002-1) **Monitoring Location:** IM

Wastewater Description: Non-contact cooling water from the middle section of the site discharged to DSN 008-1

Monitoring Location Description: Middle Non-contact cooling water Tank

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	
Aluminum, Total	mg/l	NA	---	Semi-annual	Daily Composite ⁴	NA	NR	NA	✓
Flow Rate (Average Daily) ¹	gpd	---	NA	Daily	Total Daily Flow	NA	NR	NA	
Flow, Maximum during 24 hr period ¹	gpd	NA	---	Daily	Total Daily Flow	NA	NR	NA	
Flow (Day of Sampling)	gpd	NA	---	Monthly	Total Daily Flow	NA	NR	NA	
pH	S.U.	NA	NA	NR	NA	---	Continuous	RDM	
Temperature	°F	NA	NA	NR	NA	---	Continuous	Continuous	
Total Residual Chlorine	mg/l	NA	---	Semi-annual	Grab Sample Average	NA	NR	NA	✓
Zinc, Total ⁵	mg/l	NA	---	Per Event ⁶	Daily Composite ⁴	NA	NR	NA	✓

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 Average Daily Flow and the Maximum Daily Flow for each sampling 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 7(A)(3) of this permit.

⁴ 'Daily Composite' means a composite sample taken over a full operating day consisting of grab samples collected at equal intervals of no more than four (4) hours and combined proportionally to flow.

⁵ Testing only required under the special condition specified in the below Remarks.

⁶ An event shall be the same as the special condition described in the below Remarks.

Remarks:

1. Special Condition. In the event of a dual pump failure only, the Permittee is authorized to discharge the wastewaters described in this table into the Connecticut River. Furthermore, the Permittee is required to conduct monitoring of the overflow for all parameters as specified in this table.

Table D

Discharge Serial Number: 08C (Formerly DSN 003-1)					Monitoring Location: IM				
Wastewater Description: Non-contact cooling water from the South end of the site discharged to DSN 008-1									
Monitoring Location Description: South NCCW Tank									
PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test ⁴
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency ^{2,3}	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/Reporting Frequency ²	Sample Type or measurement to be reported	
Aluminum, Total	mg/l	NA	---	Semi-annual	Daily Composite ⁵	NA	NR	NA	✓
Flow Rate (Average Daily) ¹	gpd	---	NA	Daily	Total Daily Flow	NA	NR	NA	
Flow, Maximum during 24 hr period ¹	gpd	NA	---	Daily	Total Daily Flow	NA	NR	NA	
Flow (Day of Sampling)	gpd	NA	---	Monthly	Total Daily Flow	NA	NR	NA	
Aquatic Toxicity, Daphnia pulex NOAEL = 100% ⁶	%	NA	≥90	Per Event ⁷	Composite ⁵	NA	NR	NA	
Aquatic Toxicity, Pimephales promelas NOAEL = 100% ⁶	%	NA	≥90	Per Event ⁷	Composite ⁵	NA	NR	NA	
pH	S.U.	NA	NA	NR	NA	---	Continuous	RDM	
Temperature	°F	NA	NA	NR	NA	---	Continuous	Continuous	
Total Residual Chlorine	mg/l	NA	---	Semi-annual	Grab Sample Average	NA	NR	NA	✓
Zinc, Total ⁶	mg/l	NA	---	Per Event ⁷	Daily Composite ⁵	NA	NR	NA	✓

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 Average Daily Flow and the Maximum Daily Flow for each sampling 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 7(A)(3) of this permit.

⁴ Sampling frequency shall be monthly under the special condition specified below.

⁵ 'Daily Composite' means a composite sample taken over a full operating day consisting of grab samples collected at equal intervals of no more than four (4) hours and combined proportionally to flow.

⁶ Testing only required under the special condition specified in the below Remarks.

⁷ An event shall be the same as the special condition described in the below Remarks.

Remarks:

1. Special Condition. In the event that the Connecticut River rises above the South Hot Non-contact cooling water tank, the Permittee is authorized to discharge these wastewaters into Kettle Brook. Furthermore, the Permittee is required to conduct monitoring of the overflow for all parameters as specified on this table. Under this special condition, a grab sample may replace the sample type specified on this table, with the exception of flow.

Table E

Discharge Serial Number: 08D (Formerly DSN 004-1)					Monitoring Location: IM				
Wastewater Description: Cooling water for the chest heat exchanger discharged to DSN 008-1									
Monitoring Location Description: Discharge pipe after pumps in Building 33									
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	
Aluminum, Total	mg/l	NA	---	Semi-annual	Daily Composite ⁴	NA	NR	NA	✓
Flow Rate (Average Daily) ¹	gpd	---	NA	Daily	Total Daily Flow	NA	NR	NA	
Flow, Maximum during 24 hr period ¹	gpd	NA	---	Daily	Total Daily Flow	NA	NR	NA	
Flow (Day of Sampling)	gpd	NA	---	Monthly	Total Daily Flow	NA	NR	NA	
Iron, Total	mg/l	NA	---	Semi-annual	Daily Composite ⁴	NA	NR	NA	
pH	S.U.	NA	NA	NR	NA	---	Continuous	RDM	
Temperature	°F	NA	NA	NR	NA	---	Continuous	Continuous	
Total Suspended Solids	mg/l	NA	---	Semi-annual	Daily Composite ⁴	NA	NR	NA	

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 Average Daily Flow and the Maximum Daily Flow for each sampling 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 7(A)(3) of this permit.

⁴ "Daily Composite" means a composite sample taken over a full operating day consisting of grab samples collected at equal intervals of no more than four (4) hours and combined proportionally to flow.

Table F

Discharge Serial Number: 08E (Formerly DSN 005-1)					Monitoring Location: IM				
Wastewater Description: Cooling water for the fiber recovery system discharged to DSN 008-1									
Monitoring Location Description: Discharge pipe after pumps on Floor 1 of Building 21									
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	
Aluminum, Total	mg/l	NA	---	Semi-annual	Daily Composite ⁴	NA	NR	NA	✓
Flow Rate (Average Daily) ¹	gpd	---	NA	Daily	Total Daily Flow	NA	NR	NA	
Flow, Maximum during 24 hr period ¹	gpd	NA	---	Daily	Total Daily Flow	NA	NR	NA	
Flow (Day of Sampling)	gpd	NA	---	Monthly	Total Daily Flow	NA	NR	NA	
Iron, Total	mg/l	NA	---	Quarterly	Daily Composite ⁴	NA	NR	NA	
pH	S.U.	NA	NA	NR	NA	---	Continuous	Continuous	
Temperature	°F	NA	NA	NR	NA	---	Continuous	Continuous	
Total Suspended Solids	mg/l	NA	---	Quarterly	Daily Composite ⁴	NA	NR	NA	

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 Average Daily Flow and the Maximum Daily Flow for each sampling 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 7(A)(3) of this permit.

⁴ "Daily Composite" means a composite sample taken over a full operating day consisting of grab samples collected at equal intervals of no more than four (4) hours and combined proportionally to flow.

Table G									
Discharge Serial Number: 08A-E (Formerly DSN 009-1)						Monitoring Location: SC ³			
Wastewater Description: Calculated sum of combined non-contact cooling water from DSNs 08A, 08B, 08C, 08D and 08E									
Monitoring Locations Description: Flows from five separate flow meters for DSNs 08A, 08B, 08C, 08D and 08E									
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	
Flow Rate (Average Daily) ¹	MGD	1.472	NA	Daily	Daily Flow	NA	NR	NA	
Flow, Maximum during 24 hr period ¹	MGD	NA	3.509	Daily	Daily Flow	NA	NR	NA	

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 Average Daily Flow and the Maximum Daily Flow for each sampling 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 This is not an actual combined discharge or internal waste stream. It is a mathematical summation of the total flows at DSN 08A, DSN 08B, DSN 08C, DSN 08D and DSN 08E.

Table H									
Discharge Serial Number: 08F (Formerly DSN 006-1)						Monitoring Location: IM			
Wastewater Description: Krofta dissolved air flotation clarifier effluent comprised of the following wastewaters discharged to DSN 008-1:									
<ol style="list-style-type: none"> 1) Dechlorinated/neutralized wastewater from bleach-out of paper machines #4, #10, #11, #12, and #15 (formerly DSNs 06C-1, 06E-1, 06F-1, 06G-1 and 06P-1 respectively) 2) Wastewater from boil-out of paper machines #4, #10, #11, #12, and #15 (formerly DSNs 06I-1, 06K-1, 06L-1, 06M-1 and 06Q-1 respectively) 3) Boiler blowdown, demineralizer regeneration wastewater, steam condensate, chemical area drain wastewater, acidic and basic discharges from chemical tanks containment areas and truck connectors (formerly DSN 06N-1) 4) Dechlorinated/neutralized wastewater from bleach-out of fiber recovery equipment (formerly DSN 07A-1) 5) Neutralized wastewater from boil-out of fiber recovery equipment (formerly DSN 07B-1) 									
Monitoring Location Description: Immediately following clarifier, after any defoamer addition and prior to dilution with any other waste stream									
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	
Aluminum, Total	mg/l	NA	---	Monthly	Daily Composite	NA	NR	NA	✓
Biochemical Oxygen Demand (5-day)	mg/l	26.4	39.3	Weekly	Daily Composite	59.0	NR	Grab	
Biochemical Oxygen Demand (5-day)	kg/d	404.3	602.0	Weekly	Daily Composite	NA	NR	NA	
Copper, Total	mg/l	NA	---	Monthly	Daily Composite	NA	NR	NA	✓

Table H

Discharge Serial Number: 08F (Formerly DSN 006-1) **Monitoring Location:** IM

Wastewater Description: Krofta dissolved air flotation clarifier effluent comprised of the following wastewaters discharged to DSN 008-1:

- 1) Dechlorinated/neutralized wastewater from bleach-out of paper machines #4, #10, #11, #12, and #15 (formerly DSNs 06C-1, 06E-1, 06F-1, 06G-1 and 06P-1 respectively)
- 2) Wastewater from boil-out of paper machines #4, #10, #11, #12, and #15 (formerly DSNs 06I-1, 06K-1, 06L-1, 06M-1 and 06Q-1 respectively)
- 3) Boiler blowdown, demineralizer regeneration wastewater, steam condensate, chemical area drain wastewater, acidic and basic discharges from chemical tanks containment areas and truck connectors (formerly DSN 06N-1)
- 4) Dechlorinated/neutralized wastewater from bleach-out of fiber recovery equipment (formerly DSN 07A-1)
- 5) Neutralized wastewater from boil-out of fiber recovery equipment (formerly DSN 07B-1)

Monitoring Location Description: Immediately following clarifier, after any defoamer addition and prior to dilution with any other waste stream

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	
Epichlorohydrin	mg/l	NA	----	Monthly	Grab Sample Average	NA	NR	NA	✓
Flow Rate (Average Daily) ¹	MGD	4.5258	NA	Daily	Total Daily Flow	NA	NR	NA	
Flow, Maximum during 24 hr period ¹	MGD	NA	5.76	Daily	Total Daily Flow	NA	NR	NA	
Flow (Day of Sampling)	MGD	---	5.76	Weekly	Total Daily Flow	NA	NR	NA	
Pentachlorophenol ⁴	mg/l	NA	0.008	Weekly	Grab Sample Average	0.008	NR	Grab	✓
pH, Minimum	S.U.	NA	NA	NR	NA	5.0	Continuous	Continuous	
pH, Maximum	S.U.	NA	NA	NR	NA	9.0	Continuous	Continuous	
Oil and grease, Total	mg/l	2.0	3.3	Quarterly	Grab Sample Average	4.95	NR	Grab	
Total Residual Chlorine	mg/l	NA	---	Monthly	Grab sample Average	NA	NR	NA	✓
Total Suspended Solids	mg/l	28.0	60.9	Weekly	Daily Composite	91.35	NR	Grab	
Total Suspended Solids	kg/d	429.8	933.7	Weekly	Daily Composite	NA	NR	NA	
Trichlorophenol ⁴	mg/l	NA	0.006	Weekly	Grab sample Average	0.006	NR	Grab	✓

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 Average Daily Flow and the Maximum Daily Flow for each sampling 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 7(A)(3) of this permit.

⁴ See Paragraph 10(E)

Table I

Discharge Serial Number: 013-1						Monitoring Location: 1			
Wastewater Description: Fire suppression system test water discharged to Windsor Locks Canal						Frequency of Discharge: Quarterly			
Monitoring Location Description: Fire suppression system close to truck dock						Duration of Discharge: 5 minutes			
PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test ¹
		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	
Flow (Day of sampling) ³	gpd	NA	---	Annually	Total Daily Flow	NA	NR	NA	
pH	S.U.	NA	NA	NR	NA	---	Annually	Grab	
Total Residual Chlorine	mg/l	NA	NA	NR	NA	---	Annually	Grab	✓
Footnotes:									
¹ Minimum Level Test refers to Section 7(A)(3) of this permit.									
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 The flow at the inspection valve may be reasonably estimated.									
Remarks:									
The Permittee shall maintain a record of discharge duration and frequency on site. This record shall be available for the DEEP's review upon request.									

Table J

Discharge Serial Number: 014-1						Monitoring Location: 1			
Wastewater Description: Fire suppression system test water discharged to the Connecticut River						Frequency of Discharge: Quarterly			
Monitoring Location Description: Fire suppression system close to Building #8						Duration of Discharge: 5 minutes			
PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test ¹
		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	
Flow (Day of sampling) ³	gpd	NA	---	Annually	Total Daily Flow	NA	NR	NA	
pH	S.U.	NA	NA	NR	NA	---	Annually	Grab	
Total Residual Chlorine	mg/l	NA	NA	NR	NA	---	Annually	Grab	✓

Table J

Discharge Serial Number: 014-1	Monitoring Location: 1
Wastewater Description: Fire suppression system test water discharged to the Connecticut River	Frequency of Discharge: Quarterly
Monitoring Location Description: Fire suppression system close to Building #8	Duration of Discharge: 5 minutes
Footnotes: ¹ Minimum Level Test refers to Section 7(A)(3) of this permit. 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 The flow at the inspection valve may be reasonably estimated.	
Remarks: The Permittee shall maintain a record of discharge duration and frequency on site. This record shall be available for the DEEP's review upon request.	

Table K

Discharge Serial Number: 015-1						Monitoring Location: 1			
Wastewater Description: Fire suppression system test water discharged to Kettle Brook						Frequency of Discharge: Quarterly			
Monitoring Location Description: Fire suppression system close to Building #52						Duration of Discharge: 5 minutes			
PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test ¹
		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	
Flow (Day of sampling) ³	gpd	NA	---	Annually	Total Daily Flow	NA	NR	NA	
pH	S.U.	NA	NA	NR	NA	---	Annually	Grab	
Total Residual Chlorine	mg/l	NA	NA	NR	NA	---	Annually	Grab	✓
Footnotes: ¹ Minimum Level Test refers to Section 7(A)(3) of this permit. 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 The flow at the inspection valve may be reasonably estimated.									
Remarks: The Permittee shall maintain a record of discharge duration and frequency on site. This record shall be available for the DEEP's review upon request.									

SECTION 6: SPECIAL CONDITIONS

- (A) The Permittee is prohibited from discharging any internal wastestream of DSN 08F into the waters of the state directly. All internal wastestreams of DSN 08F must discharge into the DSN 08F collection and treatment system.
- (B) The Permittee shall implement the facility's standard operating procedure ("Form: Wet end bleach-out 411/F020" and "Form: Paper machine bleach-out neutralization 400/F003"), including but not limited to treatment and record keeping, prior to batch discharging boiler blowdown, demineralizer regeneration wastewater, steam condensate, boilouts and bleachouts to the DSN 08F collection and treatment system. At a minimum, record keeping shall consist of the following for each discharge contributing to DSN 08F: discharge description, frequency, volume and details of wastewater treatment, and shall be available for the DEEP's review upon request.
- (C) The Permittee shall remove the sediments of the Diffuser Aggregate Collection Tank as needed and in coordination with a plant-wide shutdown at a minimum interval not to exceed 30 months from the previous cleanout.

SECTION 7: SAMPLE COLLECTION, HANDLING AND ANALYTICAL TECHNIQUES

(A) Chemical Analysis

- (1) Sample collection, handling and chemical analyses to determine compliance with effluent limits and conditions established in this permit shall be performed using sufficiently sensitive methods approved by the Environmental Protection Agency pursuant to 40 CFR 136 or required under 40 CFR chapter I, subchapter N, unless an alternative method has been approved in writing in accordance with 40 CFR 136.5 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 - F and H - K. 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>
Aluminum	10.0 µg/L
Chlorine, total residual	20.0 µg/L

Copper	5.0 µg/L
Epichlorohydrin	20.0 µg/L
Lead	5.0 µg/L
Nickel	5.0 µg/L
Pentachlorophenol	20.0 µg/L
Trichlorophenol	20.0 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.
- (7) The analytical method used to determine the concentration of pentachlorophenol and trichlorophenol shall be EPA Method 625 Semi-volatile Organic Compounds by Isotope Dilution GC/MS, or most recently approved equivalent method as identified by 40 CFR 136. Compliance with permit limits shall be achieved when the concentration of pentachlorophenol in the effluent sample is less than the method minimum level of 20.0 µg/l and the concentration of trichlorophenol in the effluent sample is less than the method minimum level of 20.0 µg/l.

(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 D 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).
- (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) For Aquatic Toxicity Limits and for monitoring only conditions 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% in the case of monitoring only conditions, as prescribed in section 22a-430-3(j)(7)(A)(i) of the Regulations of Connecticut State Agencies, except that five replicates of undiluted effluent and five replicates of effluent diluted to the CTC shall be included.
 - (c) Organisms shall not be fed during the tests.

- (d) Copper nitrate shall be used as the reference toxicant in tests with freshwater organisms.
 - (e) 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.
- (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.
 - (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 monitor the chronic toxicity of the DSN 008-1 in accordance with the following specifications.
- (1) Chronic toxicity testing of the discharge shall be conducted two times per year in the months of June and September.
 - (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) Connecticut 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-02-012 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 Connecticut 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 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 5(A) of this permit for the following parameters:

pH	Copper (Total recoverable and dissolved)
Hardness	Manganese (Total recoverable and dissolved)
Alkalinity	Nickel (Total recoverable and dissolved)
Conductivity	Nitrogen, Ammonia (Total as N)
Chlorine (Total residual)	Nitrogen, Nitrate (Total as N)
Aluminum	Solids, Total Suspended
Phosphorus (Total)	Lead (Total recoverable and dissolved)
Iron	Zinc (Total recoverable and dissolved)

- (8) A sodium chloride reference toxicant test shall be conducted with each chronic toxicity monitoring test using sodium chloride with an acute as the endpoint and chronic endpoint EC50, IC25, LOEC, NOEC.

SECTION 8: LIMITATIONS FOR AQUATIC TOXICITY BASED ON ACTUAL FLOWS

- (A) In lieu of demonstrating compliance with the specific Maximum Daily Toxicity Limits in Section 5 Table A, the Permittee may recalculate the IWC based on actual flows provided:

- (1) The Permittee maintains an accurate record of measured discharge flows and hours of operation for all days on which a discharge occurs; and
- (2) The total daily flow for any single operating day does not exceed the average of the daily flows for the thirty consecutive operating days prior to the sampling date by more than 25 per cent.

- (B) The In Stream Waste Concentration (IWC) shall be calculated as follows:

- (1) The measured average daily flow in gallons per hour shall be tabulated for each of the prior 30 operating days and the arithmetic average for the 30-day period calculated.
- (2) The IWC (in gallons per hour) specific for the thirty consecutive operating days prior to the sampling date shall be calculated by dividing the 30-day average hourly flow by the sum of the 30-day average flow and the zone of influence (ZOI) allocated to the discharge:

$$IWC (\%) = \frac{30\text{-day average hourly flow}}{30\text{-day average hourly flow} + ZOI} \times 100$$

- (3) The alternative Maximum Daily Toxicity Limit shall be determined by the IWC calculated above:
 - (a) For IWC equal to or less than 5%, the LC50 value shall be greater than or equal to the IWC times 20.
 - (b) For IWC greater than 5%, and less than 15%, the NOAEL value shall be an NOAEL equal to the IWC times 6.7.
 - (c) For IWC equal to or greater than 15%, the NOAEL value shall be an NOAEL equal to 100%.
 - (d) Demonstration of compliance with these alternative Maximum Daily Limits shall be performed as specified in Section 7(B) of this permit.
- (C) Compliance with the alternative Maximum Daily Toxicity Limits based on actual flows shall be determined as follows:
 - (1) For alternative limits expressed as a Minimum LC50 value in accordance with Section (8)(B)(3)(a) above, compliance shall be demonstrated when the LC50 value for a valid definitive Aquatic Toxicity Test, conducted pursuant to the requirements specified in Section (7)(B) of this permit, is greater than the alternative limit.
 - (2) For alternative limits expressed as an NOAEL value in accordance with Section (8)(B)(3)(b) above, compliance shall be demonstrated when the results of a valid pass/fail Aquatic Toxicity Test, conducted pursuant to the requirements specified in Section (7)(B) of this permit, indicates greater than 50% survival in the undiluted effluent and 90% or greater survival in the effluent at a CTC equal to the alternative limit.

SECTION 9: COMPLIANCE SCHEDULE

- (A) Per – and polyfluoroalkyl substances (PFAS) Sampling Plan. On or before thirty (30) days after the effective date of this permit, the Permittee shall employ or retain one or more qualified professionals 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 professionals. Such professionals employed or retained by the Permittee shall have demonstrated knowledge of PFAS and the sampling protocols and analytical laboratory methods associated with identifying and quantifying PFAS. The Permittee shall employ or retain one or more qualified professionals acceptable to the Commissioner until the actions required by this section of the permit have been completed, and within ten (10) days after employing or retaining any professional(s) other than one(s) originally identified under this paragraph, the Permittee shall notify the Commissioner in writing of the identity of such other professional. The Permittee shall submit to the Commissioner a description of the professional's education, experience, and training, which is relevant to the work required by this permit within ten (10) days after a

request for such a description. Nothing in this paragraph shall preclude the Commissioner from finding a previously acceptable professional unacceptable.

- (1) On or before one-hundred and twenty (120) days after the effective date of this permit, the Permittee shall submit for the Commissioner's review and approval a sampling plan for the analysis of PFAS in the intake, DSNs 08F and 008-1 using sufficiently sensitive test methods. PFAS analyses shall be performed using the methods approved by EPA pursuant to 40 CFR 136 and performed by a lab certified by Connecticut Department of Public Health. If no such test method is approved by EPA pursuant to 40 CFR 136, PFAS analyses shall be performed in accordance with either EPA Draft Method 1633 (see <https://www.epa.gov/cwa-methods/cwa-analytical-methods-and-polyfluorinated-alkyl-substances-pfas>), or the modified EPA method 537.1 including isotope dilution that follows the Department of Defense's Quality System Manual Table B-15 QA/QC requirements. The sampling plan must indicate at least two sampling events of the prescribed discharge. At a minimum this plan must identify the test method, laboratory, and sampling protocols including sample quality control procedures to be implemented.
 - (2) On or before thirty (30) days after the Commissioner's approval, the Permittee shall conduct PFAS sampling in accordance with the approved plan and shall submit the analytical report to DEEP within thirty (30) days of receiving the results.
- (B) The Permittee shall submit to the Commissioner all documents required by this section of the permit in a complete and approvable form. If the Commissioner notifies 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 (30) 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.
- (C) 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 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 (3) 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 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.

- (D) 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, 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, which 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.
- (E) Notice to Commissioner of changes. Within fourteen (14) 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.
- (F) 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:

DEEP.WaterPermittingEnforcement@ct.gov
with the subject line " Permit No. CT0000434"

SECTION 10: REPORTING REQUIREMENTS

- (A) The results of chemical analyses and any aquatic toxicity test required by this permit will be submitted electronically using web-based platform NetDMR. Monitoring results will be reported at the monitoring frequency specified in this permit. Any monitoring required more frequently than monthly will be reported on an attachment to the DMR, and any additional monitoring conducted in accordance with 40 CFR 136, or another method required for an industry-specific waste stream under 40 CFR subchapter N or O, or other methods approved by the Commissioner, will also be included on the DMR, or as an attachment, if necessary, and the results of such monitoring will be included in the calculation and reporting of the data submitted in the DMR. All aquatic toxicity reports will also be included as an attachment to the DMR. A report will also be included with the DMR which includes a detailed explanation of any violations of the limitations specified.
- (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, 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 Street
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) The permittee shall report 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. 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.
- (2) Submittal of Reports Using NetDMR
- The permittee and/or the signatory authority shall electronically submit DMRs and reports required under this permit to the DEEP using NetDMR in satisfaction of the DMR submission requirement of Section 5 of this permit. DMRs shall be submitted electronically to the DEEP no later than the last 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 shall be submitted to the DEEP as an electronic attachment to the DMR in NetDMR. The permittee shall also electronically file any written report of noncompliance described in Section 11 of this permit as an attachment in NetDMR. NetDMR is accessed from: <https://npdes-ereporting.epa.gov/net-netdmr>.
- (E) For pentachlorophenol and trichlorophenol monitoring, in accordance with 40 CFR 430.124 (Pulp, Paper and Paperboard Category), the Permittee may, in lieu of analyzing for pentachlorophenol and trichlorophenol, include a statement on each DMR certifying that there has been no use of pentachlorophenol and trichlorophenol at the facility. This certification statement shall be as follows:

“Based on my inquiry of the person or persons responsible for managing compliance with the permit limitations for pentachlorophenol and trichlorophenol, I certify that, to the best of my knowledge and belief, there has been no use of pentachlorophenol and trichlorophenol at the facility since filing the last discharge monitoring report which required such certification.”

SECTION 11: RECORDING AND REPORTING OF VIOLATIONS, ADDITIONAL TESTING REQUIREMENTS

- (A) In addition to any other written reporting requirements, the permittee shall report any instances of noncompliance with this permit with its DMR. Such reporting shall be due no later than the last day of the month following the reporting period in which the noncompliant event occurred. The information provided in the DMR shall include, at a minimum: the type of violation, the duration of the violation, the cause of the violation, and any corrective action(s) or preventative measure(s) taken to address the violation.
- (B) 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 7, and the results reported to the Bureau of Materials Management and Compliance Assurance at the address listed below and to DEEP.WaterPermittingEnforcement@ct.gov with the subject line " Permit No. CT0000434", within 30 days of the exceedance or invalid test. Results of all tests, whether valid or invalid, shall be reported.
- (C) 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.
- (D) 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

Jennifer L. Perry, P.E.
Bureau Chief
Bureau of Materials Management and Compliance
Assurance
Department of Energy and Environmental Protection

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