December 13, 2024

Wieland Rolled Products North America, LLC
215 Piedmont Street
Waterbury, CT 06706
(*via electronic mail to*: Dean.Stoddart@wieland.com)

Attn: Dean Stoddart, Engineering Manager

Re: **Permit Issuance**
Application No. 201406851
Permit No. CT0021873

Dear Dean Stoddart:

Pursuant to 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., the Department of Energy and Environmental Protection ("DEEP") has issued the attached National Pollutant Discharge Elimination System ("NPDES") permit for the above-referenced facility. No public comments were received during the comment period.

Please be advised that on and after the effective date indicated in the permit, the Permittee must comply with all terms, conditions, and limitations of the permit. If you have questions concerning this correspondence, please contact Oluwatoyin Fakilede of my staff at Oluwatoyin.fakilede@ct.gov or 860-418-5986.

Best Regards,

Audra Dickson
Director
Water Permitting and Enforcement Division
Bureau of Materials Management and
Compliance Assurance

CC: Nick Giannetti, DEEP Industrial NPDES Permitting Supervisor (nick.giannetti@ct.gov)
Robin Long, DEEP Compliance & Enforcement (robin.long@ct.gov)

National Pollutant Discharge Elimination System Permit
issued to

Permittee:
Wieland Rolled Products North America, LLC
215 Piedmont Street
Waterbury, CT 06706

Location Address:
Wieland Rolled Products North America, LLC
215 Piedmont Street
Waterbury, CT 06706

Permit ID: CT0021873

Effective Date: January 1, 2025

Receiving Stream: Naugatuck River

Issuance Date: December 13, 2024

Stream Segment ID: CT6900-00_03

Permit Expires: December 31, 2029

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 ("CWA"), 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 a National Pollutant Discharge Elimination System ("NPDES") permit program.

(B) **Wieland Rolled Products North America, 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 subsections (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 to Comply
(f) Proper Operation and Maintenance
(g) Sludge Disposal
(h) Duty to Mitigate
(i) Facility Modifications; Notification
(j) Monitoring, Records and Reporting Requirements
(k) Bypass
(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

(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 thirty 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 RCSA.

(I) The Permittee shall operate and maintain its collection and treatment system in accordance with its Operation and Maintenance Plan and with any approvals issued in accordance with RCSA Section 22a-430-3(i)(3).

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.

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

"40 CFR" means Title 40 of the Code of Federal Regulations.

"Annually" when used as a sampling frequency in Tables A and B of this permit, means that sampling is required in the month of March.

"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.

Connecticut Water Quality Standards means the regulations adopted under RCSA Sections 22a-426-1 through 22a-426-9, as amended.

"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.

"Dilution Factor" means the inverse of the "Instream Waste Concentration".

"DMR" means Discharge Monitoring Report.

"IC" means "Inhibition Concentration".

"IC_{25}" means a point estimate of the toxicant concentration that would cause a twenty-five (25) percent reduction in a non-lethal biological measurement of the test organism, such as reproduction or growth.

"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 (as a percent) of the effluent in the receiving water.

"LC" means Lethal Concentration

"LC_{50}" means the concentration lethal to fifty (50) percent of the test organisms during a specific period.

"Lowest Observed Effect Concentration" ("LOEC") means the lowest concentration of an effluent or toxicant to which organisms are exposed in a life cycle or partial life-cycle test, which causes adverse effects on the test organisms.

"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.

"No Observed Effect Concentration" ("NOEC") means the highest concentration of an effluent or toxicant to which organisms are exposed in a life cycle or partial life-cycle test, that causes no observable adverse effects on the test organisms.

"Quarter" means the calendar quarter beginning at 12:00 AM on the first day of February, May, August, and November and ending at 12:00 AM on the first day of May, August, November, and February, respectively.

"Quarterly", when used as a sampling frequency in this permit, means that sampling is required in the months of February, May, August, and November.

"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.

"Reporting Frequency" means the frequency at which monitoring results must be provided.

"Semiannual" when used as a sampling frequency in this permit, means that sampling is required in the months of February and August.

SECTION 3: COMMISSIONER'S DECISION

(A) The Commissioner has issued a final determination and found that continuance of the existing system to treat the discharge will protect the waters of the state from pollution. The Commissioner's decision is based on Application No. 201406851 for permit reissuance received on June 19, 2014, and the administrative record established in the processing of that application.

(B) Upon 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, the information provided in Application No. 201406851 received by the Department on June 19, 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 the CGS or regulations adopted

thereunder which are then applicable.

SECTION 4: GENERAL EFFLUENT LIMITATIONS

(A) The Permittee shall assure that the surface water affected by the subject discharge shall conform to the *Connecticut Water Quality Standards*.

(B) 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.

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

(D) The temperature of any discharge shall not increase the temperature of the receiving stream above 85 °F, or in any case, raise the temperature of the receiving stream by more than 4 °F.

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) The wastewaters authorized/approved by this permit shall be collected, treated, and discharged in accordance with this permit and with any approvals issued by the Commissioner or his/her authorized agent for the discharges and activities authorized by or associated with this permit. Any wastewater discharges not expressly identified in these tables or otherwise approved to be discharged by this permit shall not be authorized by this permit.

(C) All samples shall be comprised of only the wastewater described in these 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's required effluent samples, in any location other than the authorized location noted in this permit, shall be a violation of this permit.

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

(E) The Permittee shall maintain compliance with its *Solvent Management Plan* which was approved by DEEP on December 12, 2022, and all subsequent revisions to the plan which have been approved by DEEP.

Table A										
Discharge Serial Number: 001-A					**Monitoring Location:** 1 (External Outfall)					
Wastewater Description: Treated copper forming and metal finishing wastewater, deionized unit regeneration wastewater and laboratory wastewater										
Monitoring Location Description: Effluent of final clarifier					**Outfall Location:** Latitude (41° 32' 16.8") and Longitude (73° 02' 9.96")					
Discharge is to: Naugatuck River			**Allocated Zone of Influence (ZOI):** 219,463 gph				**In Stream Waste Concentration (IWC):** 3.5%			
PARAMETER	**NET DMR CODE**	**UNITS**	**FLOW/TIME BASED MONITORING**				**INSTANTANEOUS MONITORING**			**Minimum Level Test [2]**
			Average Monthly Limit	Maximum Daily Limit	Sample/ Reporting Frequency [1]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/ Reporting Frequency [1]	Sample Type or measurement to be reported	
Aluminum, total	01105	mg/l	1.973	3.946	Quarterly	Daily Composite	5.919	NR	Grab	*
Ammonia as N, total	00610	mg/l	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Aquatic toxicity, *Daphnia pulex*[3]	TAA3D	%	NA	$LC_{50} \geq 70\%$	Quarterly	Daily Composite	NA	NR	NA	
Aquatic toxicity, *Pimephales promelas*[3]	TAA6C	%	NA	$LC_{50} \geq 70\%$	Quarterly	Daily Composite	NA	NR	NA	
Chronic Aquatic Toxicity (Survival)[4,5] *Ceriodaphnia dubia*	TOP3B	%	NA	---	Annually[6]	Daily Composite	NA	NR	NA	
Chronic Aquatic Toxicity (Reproduction)[4,5] *Ceriodaphnia dubia*	TPP3B	%	NA	---	Annually[6]	Daily Composite	NA	NR	NA	
Chronic Aquatic Toxicity (Survival)[4,5] *Pimephales promelas*	TOP6C	%	NA	---	Annually[6]	Daily Composite	NA	NR	NA	
Chronic Aquatic Toxicity (Growth)[4,5] *Pimephales promelas*	TPP6C	%	NA	---	Annually[6]	Daily Composite	NA	NR	NA	
Biochemical Oxygen Demand (5-day)	00310	mg/l	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Cadmium, total	01027	mg/l	0.099	0.493	Quarterly	Daily Composite	0.740	NR	Grab	*
Cadmium, total	01027	kg/d	0.0208	0.0418	Quarterly	Daily Composite	NA	NR	NA	
Chlorine, total residual	50060	mg/l	0.189	0.407	Monthly	Grab Sample Average	0.611	NR	Grab	*
Chloroform	32106	mg/l	NA	NA	NR	NA	---	Quarterly	Grab	
Chromium, hexavalent	01032	mg/l	0.099	0.197	Monthly	Grab Sample Average	0.296	NR	Grab	*
Chromium, total	01034	mg/l	0.670	1.890	Weekly	Daily Composite	2.840	NR	Grab	*
Copper, total	01042	mg/l	0.254	0.637	Weekly	Daily Composite	0.956	NR	Grab	
Copper, total	01042	kg/d	0.184	0.463	Weekly	Daily Composite	NA	NR	Grab	
Cyanide, total	00720	mg/l	0.641	1.184	Annually	Grab Sample Average	1.200	NR	NA	
Flow Rate (Average Daily)[6]	00056	Gpd	192,000	NA	Continuous	Daily Flow	NA	NR	NA	
Flow, Maximum during 24 hr period[6]	50047	Gpd	NA	288,000	Continuous	Daily Flow	NA	NR	NA	
Fluoride, total	00951	mg/l	20	30	Quarterly	Daily Composite	45	NR	Grab	
Iron, total	01045	mg/l	2.96	4.93	Weekly	Daily Composite	7.400	NR	Grab	
Kjeldahl Nitrogen, Total (as N)	00625	mg/L	---	---	Weekly	Daily Composite	NA	NR	NA	
Lead, total	01051	mg/l	0.019	0.060	Monthly	Daily Composite	0.090	NR	Grab	*
Lead, total	01051	kg/d	0.014	0.0408	Monthly	NA	NA	NR	NA	
Methylene chloride	34423	mg/l	NA	NA	NR	NA	---	Quarterly	Grab	
Nickel, total	01067	mg/l	0.970	1.920	Weekly	Daily Composite	2.880	NR	Grab	*

Table A										
Discharge Serial Number: 001-A					**Monitoring Location:** 1 (External Outfall)					
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Discharge is to: Naugatuck River			**Allocated Zone of Influence (ZOI):** 219,463 gph				**In Stream Waste Concentration (IWC):** 3.5%			
PARAMETER	**NET DMR CODE**	**UNITS**	**FLOW/TIME BASED MONITORING**				**INSTANTANEOUS MONITORING**			**Minimum Level Test [2]**
			Average Monthly Limit	Maximum Daily Limit	Sample/ Reporting Frequency [1]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/ Reporting Frequency [1]	Sample Type or measurement to be reported	
Nickel, total	01067	Kg/d	0.489	0.982	Weekly	Daily Composite	NA	NR	Grab	
Nitrate (as N)	00620	mg/l	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Nitrite (as N)	00615	mg/l	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Nitrogen, Total [See Remark 6]	00600	mg/l	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Oil and grease	00556	mg/l	9.860	15.000	Weekly	Grab Sample Average	19.720	NR	Grab	
pH, Minimum (Ends 12 months after permit's effective date)	61942	S.U.	NA	NA	NR	NA	6.0	Continuous	Continuous	
pH, Maximum (Ends 12 months after permit's effective date)	61941	S.U.	NA	NA	NR	NA	9.0	Continuous	Continuous	
Silver, total	01077	mg/l	0.099	0.424	Monthly	Daily Composite	0.645	NR	Grab	*
Silver, total	01077	Kg/d	0.0105	0.0244	Monthly	Daily Composite	NA	NR	Grab	
Solids, total dissolved	70295	mg/l	NA	---	Quarterly	Daily Composite	NA	NR	NA	
Solids, total suspended	00530	mg/l	19.727	29.590	Weekly	Daily Composite	44.385	NR	Grab	
Surfactants (methylene blue active substances (MBAS))	38260	mg/l	NA	NA	NR	NA	---	Quarterly	Grab	
Total Toxic Organics[7]	78141	mg/l	NA	NA	NR	NA	0.060	Monthly	Grab	
Zinc, total	01092	mg/l	0.450	1.400	Weekly	Daily Composite	2.100	NR	Grab	*
Zinc, total	01092	Kg/d	0.328	1.018	Weekly	Daily Composite	NA	NR	Grab	
APPLICABLE 12 MONTHS AFTER THE EFFECTIVE DATE OF PERMIT										
pH, Minimum	61942	S.U.	NA	NA	NR	NA	6.8	Continuous	Continuous	
pH, Maximum	61941	S.U.	NA	NA	NR	NA	8.5	Continuous	Continuous	

Table A											
Discharge Serial Number: 001-A						**Monitoring Location:** 1 (External Outfall)					
Wastewater Description: Treated copper forming and metal finishing wastewater, deionized unit regeneration wastewater and laboratory wastewater											
Monitoring Location Description: Effluent of final clarifier						**Outfall Location:** Latitude (41° 32' 16.8") and Longitude (73° 02' 9.96")					
Discharge is to: Naugatuck River			**Allocated Zone of Influence (ZOI):** 219,463 gph				**In Stream Waste Concentration (IWC):** 3.5%				
PARAMETER	**NET DMR CODE**	**UNITS**	**FLOW/TIME BASED MONITORING**				**INSTANTANEOUS MONITORING**			**Minimum Level Test [2]**	
			Average Monthly Limit	Maximum Daily Limit	Sample/ Reporting Frequency [1]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/ Reporting Frequency [1]	Sample Type or measurement to be reported		

TABLE FOOTNOTES AND REMARKS

Footnotes:

[1] 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'.

[2] Minimum Level Test refers to Section 6(C) of this permit.

[3] Acute toxicity testing shall be conducted in accordance with Section 7(A) of this permit. The LC_{50} results (in %) for the acute toxicity testing shall be reported on the DMR.

[4] Chronic toxicity testing shall be conducted in accordance with Section 7(B) of this permit. The C-NOEC (Chronic-No Observed Effect Concentration) results (in %) for the conditions noted in this table shall be reported on the DMR. In addition to the reporting requirement under Section 8(B) of this permit, the aquatic toxicity monitoring report (ATMR) shall be completed for each chronic toxicity event and the completed ATMR be submitted as an attachment to the DMR.

[5] Sampling shall be in July, August or September.

[6] 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.

[7] Refer to Section 8(D) of this permit.

Remarks:

1. Abbreviations used for units are as follows: gpd means gallons per day; kg/day means kilograms per day; mg/L means milligrams per liter; SU means Standard Units; % means percentage. Other abbreviations are as follows: NA means Not Applicable; NR means Not Reportable (unless sampling is conducted relative to Section 5(D) of this permit); RDS means Range During Sampling.
2. If "---" is noted in the limit's column in the table, this means that a limit is not specified but a value must be reported on the DMR.
3. pH shall be reported to 0.1 SU. All other values shall be reported to the level of precision/accuracy reported by the laboratory.
4. In calculating average concentrations, use zeros for values reported as less than the ML.
5. "Continuous", used in this table as a "Sample" or "Sample Type", means monitoring that produces one or more data points in fifteen minutes or less.
6. Total Nitrogen means the sum of the concentrations of: Ammonia Nitrogen + Organic Nitrogen + Nitrate Nitrogen + Nitrite Nitrogen.
7. Actual MLs reported by the laboratory must be reported on the DMR. Detected concentrations less than the noted ML shall be reported on the DMR as the concentration reported by the laboratory.

SECTION 6: SAMPLE COLLECTION, HANDLING AND ANALYTICAL TECHNIQUES

(A) All samples shall be collected, handled, and analyzed in accordance with the methods approved under 40 CFR 136, unless another method is required under 40 CFR subchapter N or unless an alternative method has been approved in writing pursuant to 40 CFR 136.5. To determine compliance with limits and conditions established in this permit, monitoring must be performed using sufficiently sensitive methods approved pursuant to 40 CFR 136 for the analysis of pollutants having approved methods under that part, unless a method is required under 40 CFR subchapter N or unless an alternative method has been approved in writing pursuant to 40 CFR 136.5. Monitoring parameters which do not have approved methods of analysis defined in 40 CFR 136 shall be collected, handled, and analyzed in accordance with the methods in Section 6(B), below.

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

(C) The term Minimum Level (ML) refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL). MLs may be obtained in several ways: They may be published in a method; they may be sample concentrations equivalent to the lowest acceptable calibration point used by the laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a lab, by a factor. The Minimum Levels specified below represent the concentrations at which quantification must be achieved and verified during the chemical analyses for the parameters identified in Section 5 Table A. Analyses for these parameters must include check standards within ten percent of the specified Minimum Level or calibration points equal to or less than the specified Minimum Level.

Parameter	Minimum Level
Aluminum	10.0 µg/L
Cadmium	0.5 µg/L
Chlorine, total residual	20.0 µg/L
Chromium	5.0 µg/L
Chromium, hexavalent	10.0 µg/L
Cyanide	10.0 µg/L
Copper	5.0 µg/L
Lead	5.0 µg/L
Nickel	5.0 µg/L
Pentachlorophenol	20.0 µg/L
Trichlorophenol	20.0 µg/L
Silver	2.0 µg/L
Zinc	10.0 µg/L

(D) 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.

(E) Analyses for which quantification was verified to be at or below an ML, and which indicate that a parameter was not detected, shall be reported as “less than non-detect” where ‘non-detect’ is the numerical value equivalent to the ML for that analysis. When submitting DMRs through the NetDMR system, the Permittee shall report the non-detect value consistent with the reporting requirements for NetDMR.

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

(G) It is a violation of this permit for a Permittee or his/her designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed.

(H) Analyses required under this permit shall be performed in accordance with CGS Section 19a-29a. An "environmental laboratory", as that term is defined in the referenced section, that is performing analyses required by this permit, shall be registered and have certification acceptable to the Commissioner, as such registration and certification is necessary.

SECTION 7: AQUATIC TOXICITY TESTING

(A) **ACUTE TESTING REQUIREMENTS.** The Permittee shall conduct acute aquatic toxicity testing for DSN 001-A as follows:

(1) **TEST METHOD**: Acute aquatic toxicity shall be performed as prescribed in the reference document *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA-821-R-02-012), or the most current version, with any exceptions or clarifications noted below.

(2) **SAMPLE COLLECTION AND HANDLING:**

(a) Composite samples shall be chilled as they are collected. Grab samples shall be chilled immediately following collection. Samples shall be held at 0-6 °C until aquatic toxicity testing is initiated.

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

(c) Tests for acute aquatic toxicity shall be initiated within 36 hours of sample collection.

(3) **TEST SPECIES AND TEST DURATION:** Monitoring for aquatic toxicity to determine compliance with the acute toxicity limits in this permit shall be conducted as follows:

(a) For 48-hours utilizing neonatal *Daphnia pulex* (less than 24-hours old).

(b) For 48-hours utilizing larval *Pimephales promelas* (1-14 days old with no more than 24-hours range in age).

(4) **ACUTE ENDPOINT:** Survival at 48 hours measured by LC_{50}.

(5) **TEST CONDITIONS:**

(a) Tests for acute aquatic toxicity shall be conducted as prescribed for static non-renewal tests.

(b) Definitive (multi-concentration) testing shall be conducted. The following effluent dilution series concentrations shall be used: 100%, 75%, 50%, 25%, 12.5% and 6.25%.

(c) Synthetic freshwater prepared with deionized water adjusted to a hardness of 50 mg/L (±5 mg/L) as $CaCO_3$ shall be used as dilution water.

(d) Organisms shall not be fed during the tests.

(e) Copper nitrate shall be used as the reference toxicant.

(f) Dissolved oxygen, pH, and temperature shall be measured in the control and in all test concentrations at the beginning of the test, daily thereafter, and at test termination.

(g) Specific conductance, pH, alkalinity, hardness, and total residual chlorine shall be measured in the undiluted effluent sample 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.

(6) **CHEMICAL ANALYSIS:** All samples of the discharge used in the acute 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	Cadmium
Hardness	Copper (Total recoverable and dissolved)
Alkalinity	Lead (Total recoverable and dissolved)
Aluminum, Total	Nickel (Total recoverable and dissolved)
Conductivity	Chromium (Total recoverable and dissolved)
Chromium, hexavalent	Iron (Total recoverable and dissolved)
Chlorine, Total Residual	Nitrogen, Ammonia (Total as N)
Phosphorus, Total	Nitrogen, Nitrate (Total as N)
Iron, Total	Nitrogen, Nitrite (Total as N)
Solids, Total Suspended	Silver (Total recoverable and dissolved)
	Zinc (Total recoverable and dissolved)

(7) **TEST ACCEPTABILITY CRITERIA:** For the test results to be acceptable, control survival must equal or exceed 90%. If the laboratory control fails to meet test acceptability criteria for either of the test organisms at the end of the respective test period, then the test is considered invalid and the test must be repeated with a newly collected sample in accordance with Section 9(E).

(8) **TEST COMPLIANCE:** Compliance with limits on Acute 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 acute aquatic toxicity test indicates that the LC50 value for the test is greater than the acute toxicity limit in Table A.

(B) **CHRONIC TESTING REQUIREMENTS**. The Permittee shall conduct chronic toxicity testing for DSN 001-A as follows:

(1) **TEST METHOD**: Chronic aquatic toxicity testing shall be performed as prescribed in the reference document *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms*, EPA-821-R-02-013, or the most current version, with the following exceptions or clarifications noted below.

(2) **SAMPLE COLLECTION AND HANDLING:**

(a) Composite samples shall be chilled as they are being collected. Samples shall be held at 0 - 6 °C until chronic aquatic toxicity testing is initiated.

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

(c) Tests for chronic aquatic toxicity shall be initiated within 36 hours of sample collection.

(3) **TEST SPECIES AND TEST DURATION:** Monitoring for chronic aquatic toxicity to determine compliance with the chronic toxicity limits/conditions in the permit shall be conducted as follows:

(a) For seven days utilizing neonatal *Ceriodaphnia dubia* (less 24 hours old)

(b) For seven days utilizing newly-hatched *Pimephales promelas* (less 24 hours old).

(4) **CHRONIC ENDPOINTS:**

(a) *Ceriodaphnia dubia:* Survival and Reproduction

(b) *Pimephales promelas:* Survival and Growth

(5) **DILUTION WATER:** Naugatuck River water shall be collected upstream of the area influenced by the discharge shall be used as site control water (0% effluent) and dilution water in the toxicity tests. The Permittee shall document the dilution water sampling location by providing coordinates and/or a map of the location.

(6) **TEST CONDITIONS:**

(a) Testing for chronic aquatic toxicity shall be conducted as prescribed in the reference document for static daily renewal tests.

(b) Daily composite samples of the discharge and grab samples of the Naugatuck River for use as site water and dilution water shall be collected on: Day 1 of the test (for test initiation and renewal on Day 2 of the test); Day 3 of the test (for test solution renewal on Day 3 and Day 4 of the test); and on Day 5 of the test, (for test solution renewal on Day 5, Day 6, and Day 7 of the test). Samples shall not be dechlorinated, pH or hardness adjusted, or chemically altered in any way.

(c) Test concentrations shall be comprised of a minimum of five dilutions (100%, 75%, 50%, 25%, 12.5%, and 6.25% effluent), a dilution equal to the permit limits in Table A, laboratory control water, and site dilution water.

(c) Dissolved oxygen, pH, and temperature shall be measured in each sample of effluent and the Naugatuck River water sample prior to and immediately following renewal of the test solutions.

(d) Synthetic freshwater prepared with deionized water adjusted to a hardness of 50 mg/l (±5 mg/l) as $CaCO_3$ prepared as described in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA-821-R-02-013) shall be used as laboratory control water, in addition to the site-water control in the test protocol.

(7) **CHEMICAL ANALYSIS:** Chemical analysis for the parameters identified below shall be conducted on an undiluted aliquot of each effluent sample and each sample of upstream Naugatuck River water used in the test. The chemical analysis shall be analyzed, and results reported in accordance with the provisions listed in Section 6(A) of this permit for the following parameters:

pH	Cadmium
Hardness	Copper (Total recoverable and dissolved)
Alkalinity	Lead (Total recoverable and dissolved)
Aluminum, Total	Nickel (Total recoverable and dissolved)
Conductivity	Chromium (Total recoverable and dissolved)
Chromium, hexavalent	Iron (Total recoverable and dissolved)
Chlorine, Total Residual	Nitrogen, Ammonia (Total as N)
Phosphorus, Total	Nitrogen, Nitrate (Total as N)
Iron, Total	Nitrogen, Nitrite (Total as N)
Solids, Total Suspended	Silver
	Zinc (Total recoverable and dissolved)

(8) **TEST ACCEPTABILITY CRITERIA:** If the laboratory control fails to meet test acceptability criteria specified in the reference document for either of the test organisms at the end of the respective test period, then the test is considered invalid and the test must be repeated.

(9) **REPORTING:** A report detailing the results of the chronic toxicity monitoring shall be submitted no later than 60 days following the day sampling was concluded for that test. A hard copy of the report shall be submitted to the address in Section 8(B) and an electronic copy shall be submitted consistent with Section 8. A reference toxicant test shall be conducted with each chronic toxicity monitoring test using sodium chloride. The report shall include the items identified in Section 8(B) of this permit.

Endpoints to be reported are: 48-hour LC_{50} (survival), 7-day LC_{50} (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 IC_{25} (growth and reproduction).

SECTION 8: REPORTING REQUIREMENTS

(A) The results of chemical analyses and any aquatic toxicity test required by this permit shall be submitted electronically using NetDMR. Monitoring results shall be reported at the monitoring frequency specified in this permit. Any monitoring required more frequently than monthly shall be reported on an attachment to the Discharge Monitoring Report (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, shall also be included on the DMR, or as an attachment, if necessary, and the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Commissioner in the permit. All aquatic toxicity reports shall also be included as an attachment to the DMR. A report shall also be included with the DMR which includes a detailed explanation of any violations of the limitations specified. DMRs, attachments, and reports, shall continue to be submitted electronically in accordance with Section 8(E) below. However, if the DMRs, attachments, and reports are required to be submitted in hard copy form, they shall be received at this address by the last day of the month following the month in which samples are collected:

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

(B) The Aquatic Toxicity Monitoring Report (ATMR) shall include all applicable items identified in Section 12 of EPA-821-R-02-012 and in Section 10 of EPA-821-R-02-013, including complete and accurate aquatic toxicity test data, including percent survival of test organisms in each replicate test chamber, LC_{50} values and 95% confidence intervals for definitive test protocols, and all supporting chemical/physical measurements performed in association with any aquatic toxicity test, including measured daily flow and hours of operation for the 30 consecutive operating days prior to sample collection. The ATMR shall be submitted electronically, and a hard copy shall be sent to the Bureau of Water Protection and Land Reuse at the address below. The ATMR required by Section 7(A) and 7(B) shall be received at this address by the last day of the month following the month in which the samples are collected. The ATMR required by Section 7(B) shall be provided in accordance with the timeframe identified in Section 7(B)(9) above to:

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) For Total Toxic Organics (TTO) monitoring, the Permittee may, in lieu of analyzing for TTO, include a statement on each DMR certifying compliance with its approved solvent management plan. This certification statement is set forth in 40 CFR 433.12. If such approval had been granted and the reports include the compliance statement, the minimum frequency of sampling shall be reduced to annually in the month of October.

(E) NetDMR Reporting Requirements

(1) The Permittee shall report electronically using NetDMR, a web-based tool that allows permittees to electronically submit 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 Commissioner 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 required by this permit to the Commissioner using NetDMR in satisfaction of the DMR submission requirement of Sections 5 and 6 of this permit. DMRs shall be submitted electronically to the Commissioner no later than the last day of the month following the completed reporting period. Any monitoring conducted more frequently than monthly or any additional monitoring shall be submitted to the Commissioner as an electronic attachment to the DMR in NetDMR. The Permittee shall also electronically file any written report of noncompliance described in Section 9 of this permit as an attachment in NetDMR. NetDMR is accessed from: http://www.epa.gov/netdmr.

SECTION 9: RECORDING AND REPORTING OF VIOLATIONS, ADDITIONAL TESTING REQUIREMENTS

(A) *Noncompliance Notifications:*

(1) In accordance with Section 22a-430-3(j)(8), 22a-430-3(j)(11)(D), 22a-430-3(k)(4), and 22a-430-3(i)(3) of the RSCA, the Permittee shall notify the Commissioner of the following actual or anticipated noncompliance with the terms or conditions of this permit within two hours of becoming aware of the circumstances. All other actual or anticipated violations of the permit shall be reported to the Commissioner within 24 hours of becoming aware of the circumstances:

(a) A noncompliance that is greater than two times an effluent limitation;

(b) A noncompliance of any minimum or maximum daily limitation or excursion beyond a minimum or maximum daily range;

(c) Any condition that may endanger human health or the environment, including but not limited to noncompliance with WET limitations;

(d) Any condition that may endanger the operation of a POTW, including sludge

handling and disposal;

(e) A failure or malfunction of monitoring equipment used to comply with the monitoring requirements of this permit;

(f) Any actual or potential bypass of the Permittee's collection system or treatment facilities; or

(g) Expansions or significant alterations of any wastewater collection, treatment facility, or its method of operation for the purpose of correcting or avoiding a permit violation.

(2) Notifications shall be submitted via the Commissioner's online Noncompliance Notification Form:https://portal.ct.gov/deep/water-regulating-and-discharges/industrial-wastewater/compliance-assistance/notification-requirements.

(3) Within five days of any notification of noncompliance in accordance with Sections 10(A)(a) through 10(A)(f) of this permit, the Permittee shall submit a follow-up report using the Commissioner's online Noncompliance Follow-up Report Form: https://portal.ct.gov/deep/water-regulating-and-discharges/industrial-wastewater/compliance-assistance/notification-requirements.

The follow-up report shall contain, at a minimum, the following information: (i) A description of the noncompliance and its cause; (ii) the period of noncompliance, including exact dates and times; (iii) if the noncompliance has not been corrected, the anticipated time it is expected to continue; and (iv) steps taken or planned to correct the noncompliance and reduce, eliminate and prevent recurrence of the noncompliance.

(4) Within 30 days of any notification of facility modifications reported in accordance with Section 10(A)(g) of this permit, the Permittee shall submit a written follow-up report by submitting a "Facility and Wastewater Treatment System Modification Request for Determination" for the review and approval of the Commissioner. The report shall fully describe the changes made to the facility and reasons therefor.

(5) Notification of an actual or anticipated noncompliance or facility modification does not stay any term or condition of this permit.

(B) In accordance with Section 22a-430-3(j)(11)(E) of the RSCA, the Permittee shall notify the Commissioner within 72 hours and in writing within 30 days when he or she knows or has reason to believe that the concentration in the discharge of any substance listed in the application, or any toxic substance as listed in Appendix B or D of RSCA Section 22a-430-4, has exceeded or will exceed the highest of the following levels: (1) One hundred micrograms per liter; (2) Two hundred micrograms per liter for acrolein and acrylonitrile, five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter for antimony; (3) An alternative level specified by the Commissioner, provided such level shall not exceed the level which can be achieved by the Permittee's treatment system; or (4) A level two times the level specified in the Permittee's application.

72 hour initial notifications shall be submitted via the Commissioner's online Noncompliance Notification Form. 30 day follow-up reports shall be submitted via the Commissioner's online Noncompliance Follow-up Report Form. The Forms are available at the Commissioner's

website, here: https://portal.ct.gov/deep/water-regulating-and-discharges/industrial-wastewater/compliance-assistance/notification-requirements.

(C) 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.

(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 30 days of the discharge of any substance listed in the application if the concentration or quantity of that substance exceeds two times the level listed in the application.

(E) 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 7, and the results reported to the Bureau of Materials Management and Compliance Assurance (Attn: DMR Processing), at the address listed above, within 30 days of the exceedance or invalid test. Results of all tests, whether valid or invalid, shall be reported.

(F) If any two consecutive test results or any three test results in a twelve-month period indicate that an aquatic toxicity limit has been exceeded, the Permittee shall immediately take all reasonable steps to eliminate toxicity wherever possible and shall also submit a report, for the review and written approval of the Commissioner, which describes in detail the steps taken or that shall be taken to eliminate the toxic impacts of the discharge on the receiving water and it shall also include a proposed schedule for implementation. Such report shall be submitted in accordance with the timeframe set forth in Section 22a-430-3(j)(10)(C) of the RCSA. The Permittee shall implement all actions in accordance with the approved report and schedule.

SECTION 10: COMPLIANCE SCHEDULE

(A) Per – and polyfluoroalkyl substances (PFAS) Sampling Plan. On or before 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 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 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 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 EPA Method 1633 (see https://www.epa.gov/cwa-methods/cwa-analytical-methods-and-polyfluorinated-alkyl-substances-pfas). 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 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 30 days of receiving the results.

(B) The Permittee shall achieve compliance with the pH effluent limitations and in Table A of Section 5 of this permit, as soon as possible, but in no event later than 12 months after the effective date of this permit in accordance with the following:

(1) On or before 90 days after the date of issuance of this permit, the Permittee shall submit for the Commissioner's review and written approval a comprehensive plan and thorough report which describes and evaluates alternative actions which may be taken by the Permittee to achieve compliance with the pH limitations in Section 5 of this permit. Such report shall:

(a) Evaluate alternative actions to achieve compliance with Section 5 limits including, but not limited to, 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;

(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 CGS;

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

(e) Propose a detailed program and schedule, including the start and anticipated end dates, 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.

(C) The Permittee shall submit to the Commissioner semi-annual status reports on June 30th and December 31st of each year, beginning sixty days after the date of approval of the report referenced in Sections 10(B). Status reports shall include the following:

(1) A summary of all effluent monitoring data collected by the Permittee during the previous six (6) month period;

(2) A description of the work performed by the Permittee during the past six (6) months towards compliance with Section 10(B) above;

(3) An assessment of whether the Permittee is on schedule to comply with the compliance deadline; and

(4) If the Permittee is not on-track to comply with the compliance deadline, the steps the Permittee will take to comply.

(D) The Permittee shall perform the approved actions in accordance with the approved schedule. Within fourteen days after completing such actions, the Permittee shall certify to the Commissioner in writing that the actions have been completed as reviewed/approved.

(E) 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 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.

(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 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.

(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, 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.

(H) Notice to Commissioner of changes. Within 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 "CT0021873"
and
NPDES Permitting Program
Department of Energy and Environmental Protection
Bureau of Materials Management and Compliance Assurance
Water Permitting and Enforcement Division
79 Elm Street
Hartford, CT 06106-5127

This permit is hereby issued on December 13, 2024.

Jennifer L Perry,P.E.
Bureau Chief

JP/ OF

National Pollutant Discharge Elimination System Permit
Factsheet

SECTION 1 FACILITY SUMMARY

APPLICANT	Wieland Rolled Products North America, LLC
PERMIT NO.	CT0021873
APPLICATION NO.	201406851
DATE APPLICATION RECEIVED	June 19, 2014
LOCATION ADDRESS	215 Piedmont Street, Waterbury, CT 06706
FACILITY CONTACT	Dean Stoddart Office Phone: (203) 346-6362 Email: Dean.Stoddart@wieland.com
MAILING ADDRESS	215 Piedmont Street, Waterbury, CT 06706
DMR CONTACT	Dean Stoddart Office Phone: (203) 346-6362 Email:Dean.Stoddart@wieland.com
SECRETARY OF STATE BUSINESS ID	0917906
PERMIT TERM	5 Years
PERMIT CATEGORY	National Pollutant Discharge Elimination System ("NPDES") Major ("MA")
SIC & NAICS CODE(S)	SIC: 3351 (primary), 3316, & 3356 NAICS: 331420, 331221, & 331491
APPLICABLE EFFLUENT GUIDELINES	40 Code of Federal Regulations ("CFR") 433 and 468
PERMIT TYPE	Reissuance
OWNERSHIP	Private
RECEIVING WATER	Naugatuck River
WATERBODY SEGMENT ID'S	CT6900-00_03
WATERBODY CLASSIFICATION	B
DISCHARGE LOCATIONS (LAT, LONG)	DSN 001A: 41° 32′ 16.8", -73° 02′ 9.96"
COMPLIANCE SCHEDULE	Yes (Per- and Polyfluoroalkyl Substances sampling requirements)

DEEP STAFF ENGINEER	Oluwatoyin Fakilede (860-418-5986) Oluwatoyin.fakilede@ct.gov

TABLE OF CONTENTS

1.1 PERMIT FEES

Application Fee:

Filing Fee	Invoice No.: DEP236742	Amount: $1,300	Date Paid: 6/19/2014

Processing Fee	Invoice No.: DEP238310	Amount: $ 35,150	Date Paid: 9/12/2014

Annual Fee (per Regulations of Connecticut State Agencies ("RCSA") Sec. 22a-430-7 and General Statutes of Connecticut ("CGS") Sec. 22a-6f):

DISCHARGE CODE	WASTEWATER CATEGORY	FLOW CATEGORY (Gallons per day("gpd")	ANNUAL FEE
101035	Metal Finishing	257,000	$ 8,425.00
101017R	Copper forming	25,900	$ 1,685.00
1060000	Water Production	4,976	$ 660.00
101032X	Laboratory wastewater	100	$ 660.00
1080000	Incidental rainfall	24	$ 0
TOTAL AMOUNT			$11,430.00

1.2 APPLICATION SUBMITTAL INFORMATION

On June 19, 2014, the Department of Energy and Environmental Protection ("DEEP") received an application (Application No. 201406851) from GBC Metals LLC, now Wieland Rolled Products North America, LLC ("Permittee", "Applicant") located in Waterbury, CT 06706, for the renewal of NPDES permit CT0021873, expiring on December 17, 2014 ("the previous permit").

Consistent with the requirements of Section 22a-6g of the Connecticut General Statutes ("CGS"), the Applicant published a Notice of Permit Application in the Hartford Courant newspaper on February 6, 2014. On October 9, 2014, the application was determined to be timely and administratively sufficient.

The Permittee seeks authorization for the following in Application No. 201406851:

DSN	PROPOSED AVERAGE DAILY FLOW (gpd)	PROPOSED MAXIMUM DAILY FLOW (gpd)	PROPOSED WASTESTREAMS	TREATMENT TYPE	DISCHARGE TO
001A	192,000	288,000	Copper forming, metal finishing, deionized unit regeneration and laboratory wastewaters.	Equalization, two-stage neutralization, metal precipitation and clarification	Naugatuck River

1.3 OTHER PERMITS

The Applicant has other stormwater and wastewater discharges covered under different permitting mechanisms as follows:

- Stormwater from the site is permitted under the "General Permit for the Discharge of Stormwater Associated with Industrial Activity" (GSI002267).
- 14,490 gallons per day of metal finishing, contact cooling water, water treatment, solvent recovery and metal research laboratory wastewaters are permitted under Pretreatment Permit No. SP0001332.
- Miscellaneous wastewaters from the site, such as reverse osmosis reject wastewater, air compressor condensate, boiler blowdown, fire testing wastewater, and non-contact cooling wastewater (NCCW) are covered under the "General Permit for the Discharge of Wastewaters from Significant Industrial Users" (CTSIU0015).

1.4 FACILITY DESCRIPTION

The facility is located on an approximately 14.9-acre property. Most of the manufacturing operations are in Buildings 19-25, which encompass an area of over 145,000 square feet. The wastewater treatment plant is in Building 76. Additional buildings include trailers T3 and T4, and Buildings 01, 02, and 04. Buildings 03, 71, 75, and 78 are currently unoccupied and used for various document and unused equipment storage. Building 72 has been demolished.

1.5 FACILITY CHANGES

The Regulations of the Connecticut State Agencies ("RCSA") require that permittees notify DEEP and obtain written approval of any facility expansion or process change that may result in an increased or new discharge or constitute a new source, and of any expansion or significant changes made to a wastewater collection system, treatment system, or its method of operation in accordance with RCSA Section 22a-430-3(i). These regulatory provisions are commonly referred to as "3(i) determinations". DEEP will review the notification and determine if the change can be implemented under the current permit or if the requested change requires a permit modification to protect waters of the State in accordance with RCSA Section 22a-430-4(p).

The following are a list of 3(i) determinations since the previous permit:

Application No.	3(i) Approval issuance Date	Change Implemented
Application No. 202108372	September 1, 2021	Installation of a pH meter to the retention tank, which includes a Hach pH/Oxidation Reduction Potential ("ORP") sensor and SC200 controller, to enable confirmation that the wastewater from the plating operations is at the required pH.
		Installation of a check valve to the wastewater piping between the #2 secondary reactor tank (Unipure) and the holding tank to prevent reverse flow, because the #2 secondary reactor tank (Unipure) is at a higher elevation than the holding tank.
		Addition of an alarm to the pH controller that will alert the operator if pH is outside of the acceptable pH range.
		Installation of a transfer line from the #2 secondary clarifier (Unipure) to the sludge holding tank, to enable solids processing and removal through the sludge press.
Application No. 202209699	November 3, 2022	Installation of high-level alarms (float switch and auto dialer) to the 40,000-gallon retention tank, the 20,000-gallon holding tank and the 3950-gallon pit associated with the treatment system. The high-level alarms provide automatic notification to the facility's personnel to improve response time and allow prompt corrective actions such as re-directing or stopping the flow of wastewater.
Application No. 202212534	February 16, 2023	Installation of a 6-inch three-way ball valve with electronic actuator at the piping junction for recirculating wastewater and discharging treated wastewater. The change was

		needed to provide operators a way to open the recirculating piping and close the outfall piping simultaneously.
Application No. 202402040	March 25, 2024	Installation of a relay switch at the electronically actuated three-way ball valve that controls the discharge and recirculation of wastewater to provide better accuracy in discharge flow reporting.

1.6 DESCRIPTION OF INDUSTRIAL PROCESS

Wieland is a precision re-roll mill, producing specialty light gage copper and stainless-steel alloys. Wieland uses municipal water for its production operation at the facility. The production processes are as follows:

Acid Pickling – Plating Line #8 is used interchangeably for plating and acid pickling. When pickling occurs, the plating tank is drained and replaced with sulfuric acid. The material is first cleaned in a caustic solution and then rinsed. Then the material is treated with sulfuric acid and rinsed again. Lastly, there is an anti-tarnish treatment before the final rinse. The rinsewater drag out from the plating/pickling tanks and wastewater from the air scrubbers are directed to the #8 plating equalization tank.

Electroplating – This occurs in Plating Lines #7, #8, #9 and #10. The process includes cleaning the material in caustic solution and rinsing before the electroplating process. The rinsewater and drag-out from the plating tanks go to a separate equalization tank for each plating line. Spent rinsewater is then directed to the treatment system.

Laboratory Rinsewater – The laboratory is used for quality control from the plating process. Wastewater is generated from washing glassware in the laboratory sinks and discharged to the #8 plating equalization tank.

De-ionized Regeneration Wastewater – An ion exchange system is used to provide de-ionized water for the plating lines. The backwash from the ion exchange system drains to #10 plating line equalization tank.

1.7 TREATMENT SYSTEM DESCRIPTION

Process wastewater is discharged to the on-site wastewater treatment system through underground piping. The wastewater flows through an equalization tank, two-stage neutralization, metal precipitation and clarification prior to discharge to the Naugatuck River through the City of Waterbury's storm sewer.

The following is a description of the treatment system:

Pretreatment - The initial wastewater treatment step is performed at each plating area. The wastewaters from each of the four copper bond plating lines, overflow from the fume scrubber, and steam condensate from the heat exchanger associated with each line, are collected in a 2,000 gallon "destruct" tank located at each copper bond line. Sulfuric acid is added to the tanks to maintain a pH of approximately 2.5. These tanks are equipped with alarms to notify the treatment plant operator if the pH goes above 5. The flow from each "destruct" tank is continuously metered as it flows to the retention tank.

Equalization - Incoming wastewater from the manufacturing building flows into a 40,000-gallon retention tank where waste streams are combined and mixed in the tank with a recirculating pump for equalization. These tanks are equipped with alarms to notify the treatment plant operator if the pH goes above 5 standards units ("S.U."). The flow rate and water level are continuously monitored.

Neutralization - Neutralization of the wastewater consists of a two-stage process. Wastewater is pumped from the retention tank into the first stage neutralization tank, where lime is added to raise the pH to between 8 and 11 S.U. Wastewater then flows into the second stage neutralization tank, where air is pumped into the tank. Ferrous chloride is also added into the first tank at 175 mL/min to aid in settling during primary clarification.

Primary Clarification - Following the second stage neutralization tank, wastewater is directed to a lamella clarifier for primary clarification. A synthetic polymer (Amerfloc 285) is added to enhance clarification. A portion of the sludge generated in the primary clarifier is returned to the first neutralization tank for further treatment. The remaining sludge is pumped to a holding tank for solids.

Wastewater from the primary clarifier is usually directed to an uncovered outdoor holding tank, also referred to as the "swimming pool", which is continuously monitored by a water level meter. When necessary, the wastewater may be manually redirected to an underground tank, known as "Pit", when the water requires further treatment. In such cases, wastewater from the Pit flows back into the retention tank to repeat equalization, neutralization, and primary clarification. The Pit has an approximate capacity of 3,950 gallons and is an underground tank beneath the wastewater treatment plant. The Pit routinely receives water from the trenches in the wastewater treatment plant area. The trenches are used to collect wastewater generated by draining and cleaning wastewater treatment tanks and other housekeeping tasks.

Secondary Clarification - Wastewater is pumped to either the Parkson Reactor Tank (via pumps A & C) or the Unipure Reactor Tank (via pump B) from "swimming pool". Both reactor tanks add ferrous chloride, lime, and air to the wastewater which is thoroughly mixed with a mechanical mixer. Water flows to the Parkson clarifier at up to 135 gallons per minute ("gpm") and polymer (Amerfloc 285) is added at the rate of 600 to 700 mL/min to enhance clarification. Water flows to the Unipure clarifier at 40 to 70 gpm and the same polymer is added at the rate of 500 to 600 mL/min to enhance clarification. For secondary clarification and solids removal, water from the Parkson Reactor Tank flows to the Parkson Clarifier, and water from the Unipure Reactor Tank flows to the Unipure Clarifier. Typically, only the Parkson Reactor and Clarifier are used when flows are low. Sludge from the clarifiers is either pumped back to the first neutralization tank or to the solids holding tank.

Sludge Dewatering - A holding tank for solids is fed through a filter press before off-site disposal. Filtrate from the dewatering process is sent to the Pit, which then flows to the retention tank (equalization basin) and through the rest of the treatment process.

Treated Effluent Discharge - Treated effluent from the secondary clarifiers is discharged to the Naugatuck River via the City of Waterbury's storm drain system. Prior to discharge, the treated effluent flows through a flow meter and a pH meter, each with chart recorders. If the pH is outside the target range, an alarm sounds at the discharge sampling location. The treated wastewater also flows through a turbidity meter. If the pH is outside of the target range or turbidity exceeds 15

Nephelometric Turbidity Units (NTU), the wastewater is manually redirected back to the Pit by gravity for further treatment.

1.8 COMPLIANCE HISTORY

Based on Wieland's Discharge Monitoring Reports ("DMR") data evaluated from January 2019 to December 2023, the Permittee reported the following effluent violations. The exceedances have been corrected.

Table 1.4: Effluent violations in the past 5 years

MONTH/ YEAR	DSN	PARAMETER	TYPE OF LIMIT	PERMITTED LIMIT	EXCEEDENCE
11/30/2019	001A	Aquatic toxicity, *Daphnia pulex*	MDL	70%	34.4%
2/28/2021	001A	Aquatic toxicity, *Daphnia pulex*	MDL	70%	38%
3/31/2024	001A	Aquatic toxicity, *Daphnia pulex*	MDL	70%	6.25%
3/31/2021	001A	Zinc, Total	MDL	1.91 mg/l	2.38 mg/l
1/31/2022	001A	Iron, Total	MDL	5.0 mg/l	7.6 mg/l
4/30/2022	001A	Total Suspended Solids	MDL	30 mg/l	38.5 mg/l
8/31/2022	001A	Total Suspended Solids	MDL	30 mg/l	37.5 mg/l

MDL: Maximum daily limit

The Permittee is not subject to an ongoing enforcement action but had undergone the following enforcement actions:

A Notice of Violation (NOV WR IN 18014) was issued on May 31, 2018, for the following.

1. Failure to maintain practices, procedures, and facilities designed to prevent, minimize, and control spills, leaks, or other unplanned releases from Wieland as required by Section 22a-430-3(p)(1) of the RCSA on December 5, 2014, February 17, 2015, February 23, 2015, January 26, 2016, June 11, 2017, July 11, 2017, and January 20, 2018.

2. Failure to notify the DEEP in accordance with the requirements of Sections 22a-430-3(j)(11)(D) and 22a-430-3(k)(4) of the RCSA for spill/bypass events cited above.

The notice of violation ("NOV") required Wieland to review, update, as needed, and submit their spill prevention and control plan, standard operating procedures, and updated operations and maintenance manual. The NOV was closed on July 27, 2023, when the Permittee obtained a consultant to manage on-site monitoring.

An Administrative Order (Docket No. CWA-AO-R01-FY19-05) was issued by the United States Environmental Protection Agency ("EPA") on April 18, 2019, for the following:

On four occasions from February 17, 2015, through June 11, 2017, Somers Thin Strip, now Wieland, discharged untreated or partially treated wastewater via an outfall of the City of Waterbury's Municipal Separate Storm System ("MS4") to the Naugatuck River without authorization of an NPDES permit.

The order required Wieland to submit a revised spill prevention, control, and countermeasure plan / spill prevention and control plan ("SPCC & SPC Plan") and a wastewater conveyance system asset management plan to EPA and DEEP. Wieland complied with the requirements and the administrative order was closed on February 25, 2020.

Previous NPDES Permit Compliance Schedule:
The previous permit issued on December 18, 2009, contained a compliance schedule that required the Permittee to submit a report of the results of chronic toxicity tests before December 31st of each calendar year. The Permittee complied and has submitted the results of chronic toxicity tests to DEEP annually.

The compliance schedule in the previous permit also required the Permittee to submit for the review and written approval of the Commissioner, plans and a schedule for the elimination of all direct non-contact cooling water discharges (NCCW) into surface waters (DSN 001-B) and to perform the elimination after approval. The Permittee has re-routed the NCCW, and the NCCW is now permitted under General Permit No. CTSIU0015 (see Section 1.3 of this fact sheet).

1.9 GENERAL ISSUES RELATED TO THE APPLICATION

1.9.1 FEDERALLY RECOGNIZED INDIAN LAND
As provided in the permit application, the site is not located on federally recognized Indian land.

1.9.2 COASTAL AREA/COASTAL BOUNDARY
The activity is not located within a coastal boundary as defined in CGS 22a-94(b).

1.9.3 ENDANGERED SPECIES
Based on a letter dated April 22, 2024, from DEEP's Bureau of Natural Resources, no extant populations of federal or state endangered, threatened or special concern species (RCSA Sec. 26-306) are known to occur within the project area associated with the wastewater discharge.

1.9.4 AQUIFER PROTECTION AREAS
As provided in the permit application, the site is not located within a protected area identified on a Level A or B map.

1.9.5 CONSERVATION OR PRESERVATION RESTRICTION
As provided in the permit application, the property is not subject to a conservation or preservation restriction.

1.9.6 PUBLIC WATER SUPPLY WATERSHED
As provided in the permit application, the site is not located within a public water supply watershed.

SECTION 2 RECEIVING WATER BODY INFORMATION
Wieland discharges into the Naugatuck River. The segment of the Naugatuck River is identified as CT6900- 00_03 and is a class "B" water. Class B waters are designated for: habitat for fish and

other aquatic life and wildlife; recreation; and industrial and agricultural water supply. This waterbody segment is identified on the 2022 Integrated Water Quality Report as an impaired waterbody. There are two impaired designated uses associated with this waterbody: 1) An impairment to recreation due to *Escherichia coli* (*E. coli*) and 2) an impairment to the habitat for fish, other aquatic life, and wildlife with an unknown cause.
FINAL-2022-IWQR-Connecticut-305b-Assessment-Results-for-Rivers-and-Streams.pdf
FINAL-2022-IWQR-List-of-Impaired-Waters-for-Connecticut-EPA-Category-5.pdf

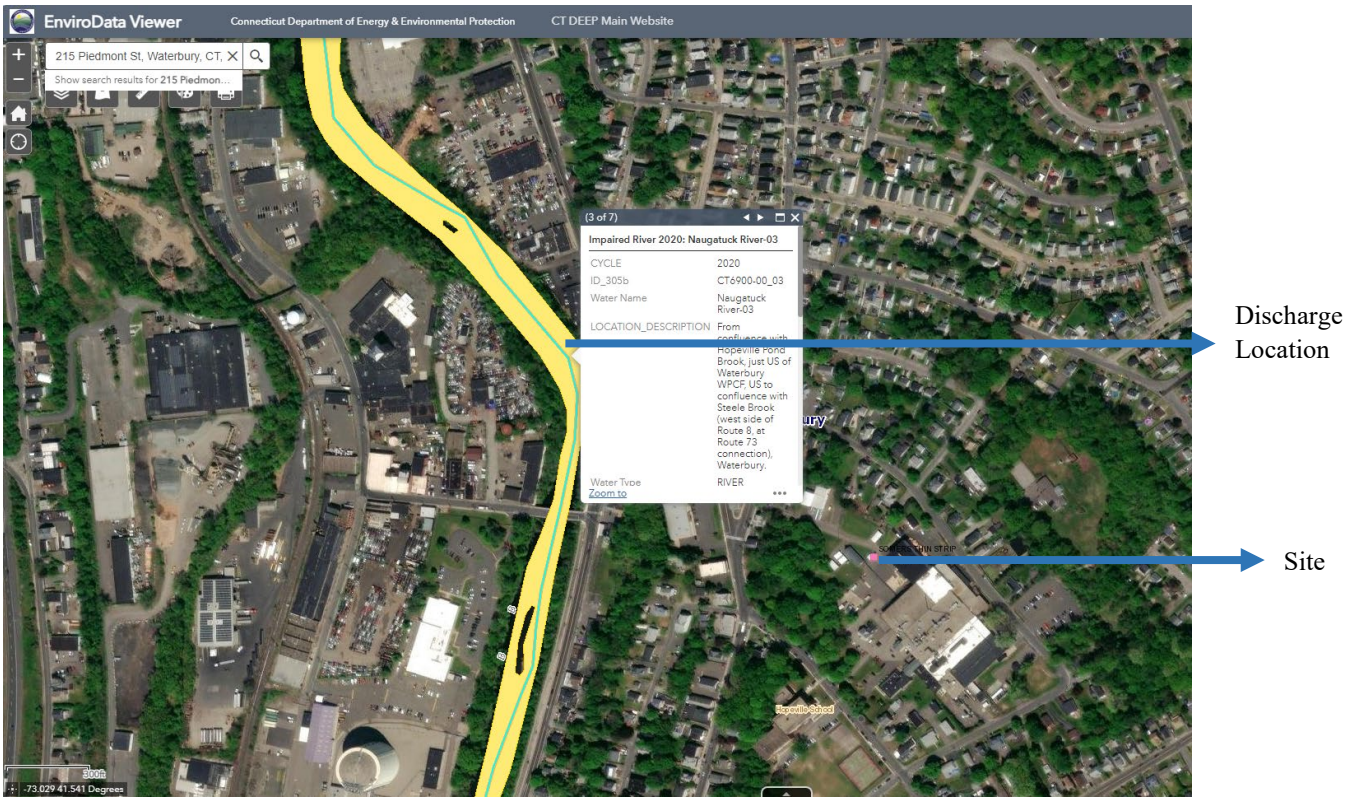
Figure 2.1. Image of Applicable Section of 2022 Connecticut Integrated Water Quality Report

Waterbody Segment ID	Waterbody Name	Location	Miles	Aquatic Life	Recreation
CT6900-00_03	Naugatuck River-03	From confluence with Hopeville Pond Brook, just US of Waterbury WPCF, US to confluence with Steele Brook (west side of Route 8, at Route 73 connection), Waterbury.	3.52	Not Supporting	Not Supporting

Figure 2.2. Image of Applicable List of impaired waters for Connecticut

Waterbody Segment ID	Waterbody Name	Cause	Impaired Designated Use
CT6900-00_03	Naugatuck River-03	CAUSE UNKNOWN	Habitat for Fish, Other Aquatic Life and Wildlife

Figure 2.3. Image of discharge location with waterbody segment ID



2.2 APPLICABLE TOTAL MAXIMUM DAILY LOAD (TMDL)

A TMDL for *Escherichia coli* (impairment to recreation) has been established for Naugatuck River, Segment ID CT6900-00_03 (approved by EPA on June 4, 2008) (Naugatuck River Regional Basin TMDL (epa.gov)). The discharge does not contain sanitary sewage and *E. coli* is not likely to be present in the discharge. Due to this, *E. coli* monitoring and limits are not incorporated into this permit.

"A Total Maximum Daily Load Analysis to Achieve Water Quality Standards for Dissolved Oxygen in Long Island Sound" (December 2000) (Long Island Sound TMDL), based on control of nitrogen also applies to this segment of Thames River. However, the Permittee's discharge has not been assigned a waste load allocation for nitrogen as part of this TMDL. Nitrogen monitoring has been included in the permit due to the impairment.

Figure 2.4. Image of Applicable 2022 IWQR Waterbodies with Adopted TMDLs

Waterbody Segment ID	TMDL	Basin Number	Waterbody Name	Impaired Designated Use	Cause	EPA Approved	TMDL Link	Category/sub category
CT6900-00_03	Naugatuck River Regional Basin *E.coli* TMDL	6900	Naugatuck River	Recreation	*Escherichia coli*	2008	https://portal.ct.gov/-/media/DEEP/water/tmdl/CTFinalTMDL/naugatuckRegional	4a

2.3 PHOSPHORUS

DEEP developed a final report "Recommendations for Phosphorus Strategy Pursuant to PA 12-155" (February 16, 2017) (Phosphorus Strategy PA12-155) for freshwater in 2017. The Phosphorus Strategy applies to the Naugatuck River; however, the Permittee was not required to meet phosphorus reduction targets or performance limits pursuant to enrichment factor (EF) goals. Therefore, only monitoring requirements are included in the permit.

SECTION 3 PERMIT CONDITIONS AND EFFLUENT LIMITATIONS

3.1 POLLUTANTS OF CONCERN

The following pollutants are included as monitoring pollutants in the permit for the reasons noted below:

POLLUTANT	REASON FOR INCLUSION			
	POLLUTANT WITH AN APPLICABLE TECHNOLOGY-BASED LIMIT	POLLUTANT WITH A WASTE LOAD ALLOCATION FROM A TMDL	POLLUTANT IDENTIFIED AS PRESENT IN THE EFFLUENT THROUGH SAMPLING	POLLUTANT OTHERWISE EXPECTED TO BE PRESENT IN THE EFFLUENT
Aluminum, total				✓
Ammonia as N, total			✓	
Biochemical Oxygen Demand (5- day)			✓	
Cadmium, total	✓		✓	
Chlorine, total residual			✓	
Chloroform			✓	
Chromium, hexavalent	✓		✓	
Chromium, total	✓		✓	
Copper, total	✓		✓	
Cyanide, total	✓		✓	
Fluoride, total			✓	
Iron, total			✓	
Kjeldahl Nitrogen, Total (as N)	✓		✓	✓
Lead, total	✓		✓	
Methylene Chloride			✓	
Nickel, total	✓		✓	
Nitrate (as N)			✓	✓
Nitrite (as N)			✓	✓
Oil & Grease, total	✓		✓	
Phosphorus, total			✓	
Silver, total	✓		✓	
Solids, total dissolved			✓	
Solids, total suspended	✓		✓	
Surfactants, anionic (MBAS)			✓	

POLLUTANT	REASON FOR INCLUSION			
	POLLUTANT WITH AN APPLICABLE TECHNOLOGY-BASED LIMIT	POLLUTANT WITH A WASTE LOAD ALLOCATION FROM A TMDL	POLLUTANT IDENTIFIED AS PRESENT IN THE EFFLUENT THROUGH SAMPLING	POLLUTANT OTHERWISE EXPECTED TO BE PRESENT IN THE EFFLUENT
Total Toxic Organics	✓		✓	
Zinc, total	✓		✓	

Acute and chronic toxicity monitoring requirements are also included in the permit consistent with Section 22a-430-3(j)(3) of the RCSA. pH monitoring was also included in the permit consistent with Section 22a-426-9(a)(1).

3.2 TECHNOLOGY BASED EFFLUENT LIMITATIONS

Technology-based treatment requirements represent the minimum level of control that must be imposed under CWA § 301(b) and 402 to meet best practicable control technology currently available ("BPT") for conventional pollutants and some metals, best conventional control technology ("BCT") for conventional pollutants, and best available technology economically achievable ("BAT") for toxic and non-conventional pollutants. *See* 40 CFR § 125 Subpart A and RCSA Section 22a-430-4(l)(4)(A).

Subpart A of 40 CFR Part 125 establishes criteria and standards for the imposition of technology-based treatment requirements in permits under § 301(b) of the CWA, including the application of EPA promulgated Effluent Limitation Guidelines ("ELGs") and case-by-case determinations of effluent limitations under CWA § 402(a)(1). EPA promulgates New Source Performance Standards ("NSPS") under CWA § 306 and 40 CFR § 401.12. *See also* 40 CFR §§ 122.2 (definition of "new source") and 122.29.

In the absence of published technology-based effluent guidelines, the permit writer is authorized under CWA § 402(a)(1)(B) and RCSA section 22a-430-4(m) to establish effluent limitations on a case-by-case basis using best professional judgment ("BPJ").

The following Effluent Guidelines and Standards were reviewed to determine their applicability to the facility's discharge DSN 001A:

3.2.1 40 CFR 433: METAL FINISHING POINT SOURCE CATEGORY:

Wieland is a re-roll facility that has been discharging wastewaters from the site since the 1930s. Wieland performs electroplating and passivation which are part of the "core" and "ancillary" operations identified in 40 CFR 433. Therefore, its discharge is regulated as a metal finishing discharge under 40 CFR 433. Since Wieland has discharged since 1930s/1940s and has not made recent significant changes, it is considered an existing source.

3.2.2 40 CFR 468: COPPER FORMING POINT SOURCE CATEGORY:

40 CFR 468 is applicable to the discharges associated with copper forming operations (see Attachment B for 40 CFR 468 effluent guidelines). The facilities regulated by the copper forming

category are generally included within SIC codes 3351 and 3357. Wieland's activities are covered under SIC codes 3351, 3316 and 3356.

Wieland is engaged in acid pickling of copper strip at its site on Line #8. Pickling is a surface treatment process that is classified as an ancillary operation under 40 CFR 468. The copper wire is cleaned and plated as necessary. The spent plating solutions associated with this operation are shipped off-site for disposal.

3.2.3 LIMIT CALCULATION:

The different waste stream flows are summarized below:

Table 3.2.1: Summary of wastewater flows before treatment

Process Line No.	Process	Average Flow (gpd)	Maximum Flow (gpd)
Line # 7	Metal Finishing	36,000	53,000
Line # 8	Copper Forming	21,400	25,900
Line # 9	Metal Finishing	50,000	75,000
Line # 10	Metal Finishing	82,000	129,000
	QA Laboratory	100	100
	DI regeneration wastewater	2,476	4,976
	Incidental rainfall[1]	24	24
	Total	192,000	288,000

[1] See Attachment A

The most stringent of BAT, BPT and BCT of the federal effluent guidelines are used for the derivation of permit limits. Using the building block concept, effluent limitations for the copper forming wastewater from pickling rinse, bath scrubber and fume scrubber operations are calculated based on 1,700 off-kg/day projection by the Permittee.

POLLUTANT	Table 3.2.2: Effluent limits of copper forming wastewater	
	AML (Pickling rinse, bath and fume scrubber)	MDL (Pickling rinse, bath and fume scrubber)
Chromium (BAT)	$[0.235 + 0.02 + 0.112]\frac{mg}{off-kg}$ X 1,700 off − kg = 623.9mg	$[0.574 + 0.051 + 0.275]\frac{mg}{off-kg}$ X 1,700 off − kg = 1,530mg
Copper (BAT)	$[1.306 + 0.116 + 0.626]\frac{mg}{off-kg}$ X 1,700 off − kg = 3,481.6mg	$[2.481 + 0.220 + 1.189]\frac{mg}{off-kg}$ X 1,700 off − kg = 6,613mg
Lead (BAT)	$[0.169 + 0.015 + 0.081]\frac{mg}{off-kg}$ X 1,700 off − kg = 450.5mg	$[0.195 + 0.017 + 0.093]\frac{mg}{off-kg}$ X 1,700 off − kg = 518.5mg
Nickel (BAT)	$[1.658 + 0.147 + 0.795]\frac{mg}{off-kg}$ X 1,700 off − kg = 4,420mg	$[2.507 + 0.222 + 1.201]\frac{mg}{off-kg}$ X 1,700 off − kg = 6,681mg
Zinc (BAT)	$[0.796 + 0.070 + 0.381]\frac{mg}{off-kg}$ X 1,700 off − kg = 2,120mg	$[1.906 + 0.169 + 0.913]\frac{mg}{off-kg}$ X 1,700 off − kg = 5,079.6mg
O &G (BPT)	$[43.464 + 1.392 + 7.512]\frac{mg}{off-kg}$ X 1,700 off − kg = 89,025.6mg	$[72.44 + 2.32 + 12.52]\frac{mg}{off-kg}$ X 1,700 off − kg = 148,376mg

POLLUTANT	Table 3.2.2: Effluent limits of copper forming wastewater	
	AML (Pickling rinse, bath and fume scrubber)	MDL (Pickling rinse, bath and fume scrubber)
TSS (BPT)	$[70.629 + 2.262 + 12.207]\frac{\text{mg}}{\text{off} - \text{kg}}$ X 1,700 off − kg = 144,666.6mg	$[148.502 + 4.756 + 25.666]\frac{\text{mg}}{\text{off} - \text{kg}}$ X 1,700 off − kg = 304,170.8mg

The BAT and BPT effluent limitations for metal finishing wastewaters are converted to mass limits from concentration limits for consistency with the copper forming mass limits using the metal finishing average daily flow as shown below:

POLLUTANT	Table 3.2.3: Effluent limits of metal finishing wastewater	
	Monthly average shall not exceed	Maximum for any 1 day
Chromium	1.71 mg/l X 635,880 l = 1,087,355 mg	2.77 mg/l X 635,880 l = 1,761,388 mg
Copper	2.07 mg/l X 635,880 l = 1,316,272 mg	3.38 mg/l X 635,880 l = 2,149,274 mg
Lead	0.43 mg/l X 635,880 l = 273,428 mg	0.69 mg/l X 635,880 l = 438,757 mg
Nickel	2.38 mg/l X 635,880 l = 1,513,394 mg	3.98 mg/l X 635,880 l = 2,530,802 mg
Zinc	1.48 mg/l X 635,880 l = 941,102 mg	2.61 mg/l X 635,880 l = 1,659,647 mg
O &G	26 mg/l X 635,880 l = 16,532,880 mg	52 mg/l X 635,880 l = 33,065,760 mg
TSS	31 mg/l X 635,880 l = 19,712,280 mg	60mg/l X 635,880 l = 38,152,800 mg
Average daily metal finishing wastewaters = 168,000 gpd = 635,880 liters, 1 gal. = 3.785 liters		

The total mass limits for the process wastewaters are calculated below:

POLLUTANT	Table 3.2.4: Combined copper forming and metal finishing wastewater effluent limits	
	Monthly average shall not exceed	Maximum for any 1 day
Chromium	623.9 + 1,087,355 ≈ 1,087,979 mg	1,530 + 1,761,388 = 1,762,918 mg
Copper	3,481.6 + 1,316,272 ≈ 1,319,754 mg	6,613 + 2,149,274 = 2,155,887 mg
Lead	450.5 + 273,428 ≈ 273,879 mg	518.5 + 438,757 ≈ 439,276 mg
Nickel	4,420 + 1,513,394 = 1,517,814 mg	6,681 + 2,530,802 = 2,537,483 mg
Zinc	2,120 + 941,102 = 943,222 mg	5,079.6 + 1,659,647 ≈ 1,664,727mg
O &G	89,025.6 + 16,532,880 ≈ 16,621,906 mg	148,376 + 33,065,760 = 33,214,136 mg
TSS	144,666.6 + 19,712,280 = 19,856,947 mg	304,170.8 + 38,152,800 = 38,456,971 mg

The wastewater comprises of process wastewater, incidental rainfall water, QA Laboratory water and DI regeneration wastewater and laboratory wastewater. Many of the pollutants are not expected to be present in the dilution water (DI regeneration wastewater, laboratory water and incidental rainfall). Therefore, the concentration limits are adjusted using the combined waste stream formula as shown in the table below:

POLLUTANT	Table 3.2.5: Adjusted effluent limitation based on combined waste stream formula	
	Process flow = 189,400 gpd = 716,879 liters/day, Laboratory wastewater = 100 gpd = 378.5 liters/day, DI regeneration wastewater = 2,476 gpd ≈ 9,372 liters/day, Incidental rainfall = 24 gpd = 91 liters/day, Combined total flow = 192,000 gpd = 726,720 liters/day, (1 gal. = 3.785 liters). The pollutant concentrations are assumed to be zero in the dilution waste stream.	
	State Limits Based on Section 22a-430-4(s)(2) of the RCSA	40 CFR 433 and 40 CFR 468 Federal Effluent Limitation
Aluminum	AML = $2.0\frac{mg}{l} = \frac{2.0\frac{mg}{l} X\ 716,879}{726,720} = 1.973\ \frac{mg}{l}$ MDL = $4.0\frac{mg}{l} = \frac{4.0\frac{mg}{l} X\ 716,879}{726,720} = 3.946\ \frac{mg}{l}$ MIL = $6.0\frac{mg}{l} = \frac{6.0\frac{mg}{l} X\ 716,879}{726,720} = 5.919\ \frac{mg}{l}$	
Cadmium	AML = $0.1\frac{mg}{l} = \frac{0.1\frac{mg}{l} X\ 716,879}{726,720} = 0.099\ \frac{mg}{l}$ MDL = $0.5\frac{mg}{l} = \frac{0.5\frac{mg}{l} X\ 716,879}{726,720} = 0.493\ \frac{mg}{l}$ MIL = $0.75\frac{mg}{l} = \frac{0.75\frac{mg}{l} X\ 716,879}{726,720} = 0.740\ \frac{mg}{l}$	AML = $0.26\frac{mg}{l} = \frac{0.26\frac{mg}{l} X\ 716,879}{726,720} = 0.256\ \frac{mg}{l}$ MDL = $0.69\frac{mg}{l} = \frac{0.69\frac{mg}{l} X\ 716,879}{726,720} = 0.681\frac{mg}{l}$
Chromium	AML = $1.0\frac{mg}{l} = \frac{1.0\frac{mg}{l} X\ 716,879}{726,720} = 0.986\ \frac{mg}{l}$ MDL = $2.0\frac{mg}{l} = \frac{2.0\frac{mg}{l} X\ 716,879}{726,720} = 1.973\ \frac{mg}{l}$ MIL = $3.0\frac{mg}{l} = \frac{3.0\frac{mg}{l} X\ 716,879}{726,720} = 2.959\ \frac{mg}{l}$	AML = $\frac{1,087,979\ mg}{726,720\ litres} = 1.497\ \frac{mg}{l}$ MDL = $\frac{1,762,918\ mg}{726,720\ litres} = 2.426\ \frac{mg}{l}$
Chromium, hexavalent	AML = $0.1\frac{mg}{l} = \frac{0.1\frac{mg}{l} X\ 716,879}{726,720} = 0.099\ \frac{mg}{l}$ MDL = $0.2\frac{mg}{l} = \frac{0.2\frac{mg}{l} X\ 716,879}{726,720} = 0.197\ \frac{mg}{l}$ MIL = $0.3\frac{mg}{l} = \frac{0.3\frac{mg}{l} X\ 716,879}{726,720} = 0.296\ \frac{mg}{l}$	
Copper	AML = $1.0\frac{mg}{l} = \frac{1.0\frac{mg}{l} X\ 716,879}{726,720} = 0.986\ \frac{mg}{l}$ MDL = $2.0\frac{mg}{l} = \frac{2.0\frac{mg}{l} X\ 716,879}{726,720} = 1.973\ \frac{mg}{l}$ MIL = $3.0\frac{mg}{l} = \frac{3.0\frac{mg}{l} X\ 716,879}{726,720} = 2.959\ \frac{mg}{l}$	AML = $\frac{1,319,754\ mg}{726,720\ litres} = 1.816\ \frac{mg}{l}$ MDL = $\frac{2,155,887\ mg}{726,720\ litres} = 2.967\ \frac{mg}{l}$
Cyanide	AML = $0.65\frac{mg}{l} = \frac{0.65\frac{mg}{l} X\ 716,879}{726,720} = 0.641\ \frac{mg}{l}$ MDL = $1.2\frac{mg}{l} = \frac{1.2\frac{mg}{l} X\ 716,879}{726,720} = 1.184\ \frac{mg}{l}$	
Iron	AML = $3.0\frac{mg}{l} = \frac{3.0\frac{mg}{l} X\ 716,879}{726,720} = 2.959\ \frac{mg}{l}$ MDL = $5.0\frac{mg}{l} = \frac{5.0\frac{mg}{l} X\ 716,879}{726,720} = 4.932\ \frac{mg}{l}$ MIL = $7.5\frac{mg}{l} = \frac{7.5\frac{mg}{l} X\ 716,879}{726,720} = 7.398\ \frac{mg}{l}$	
Lead	AML = $0.1\frac{mg}{l} = \frac{0.1\frac{mg}{l} X\ 716,879}{726,720} = 0.099\ \frac{mg}{l}$ MDL = $0.5\frac{mg}{l} = \frac{0.5\frac{mg}{l} X\ 716,879}{726,720} = 0.493\ \frac{mg}{l}$ MIL = $0.75\frac{mg}{l} = \frac{0.75\frac{mg}{l} X\ 716,879}{726,720} = 0.740\ \frac{mg}{l}$	AML = $\frac{273,879\ mg}{726,720\ litres} = 0.377\ \frac{mg}{l}$ MDL = $\frac{439,276\ mg}{726,720\ litres} = 0.604\ \frac{mg}{l}$

POLLUTANT	Table 3.2.5: Adjusted effluent limitation based on combined waste stream formula	
	Process flow = 189,400 gpd = 716,879 liters/day, Laboratory wastewater = 100 gpd = 378.5 liters/day, DI regeneration wastewater = 2,476 gpd ≈ 9,372 liters/day, Incidental rainfall = 24 gpd = 91 liters/day, Combined total flow = 192,000 gpd = 726,720 liters/day, (1 gal. = 3.785 liters). The pollutant concentrations are assumed to be zero in the dilution waste stream.	
	State Limits Based on Section 22a-430-4(s)(2) of the RCSA	40 CFR 433 and 40 CFR 468 Federal Effluent Limitation
Nickel	AML = $1.0\frac{mg}{l} = \frac{1.0\frac{mg}{l} X\ 716,879}{726,720} = 0.986\ \frac{mg}{l}$ MDL = $2.0\frac{mg}{l} = \frac{2.0\frac{mg}{l} X\ 716,879}{726,720} = 1.973\ \frac{mg}{l}$ MIL = $3.0\frac{mg}{l} = \frac{3.0\frac{mg}{l} X\ 716,879}{726,720} = 2.959\ \frac{mg}{l}$	AML = $\frac{1,517,814\ mg}{726,720\ litres} = 2.088\ \frac{mg}{l}$ MDL = $\frac{2,537,483\ mg}{726,720\ litres} = 3.492\ \frac{mg}{l}$
Silver	AML = $0.1\frac{mg}{l} = \frac{0.1\frac{mg}{l} X\ 716,879}{726,720} = 0.099\ \frac{mg}{l}$ MDL = $0.5\frac{mg}{l} = \frac{0.5\frac{mg}{l} X\ 716,879}{726,720} = 0.493\ \frac{mg}{l}$ MIL = $0.75\frac{mg}{l} = \frac{0.75\frac{mg}{l} X\ 716,879}{726,720} = 0.740\ \frac{mg}{l}$	AML = $0.24\frac{mg}{l} = \frac{0.24\frac{mg}{l} X\ 716,879}{726,720} = 0.237\ \frac{mg}{l}$ MDL = $0.43\frac{mg}{l} = \frac{0.43\frac{mg}{l} X\ 716,879}{726,720} = 0.424\ \frac{mg}{l}$
O&G	AML = $10\frac{mg}{l} = \frac{10\frac{mg}{l} X\ 716,879}{726,720} = 9.864\ \frac{mg}{l}$ MIL = $20\frac{mg}{l} = \frac{20\frac{mg}{l} X\ 716,879}{726,720} = 19.729\ \frac{mg}{l}$	AML = $\frac{16,621,906\ mg}{726,720\ litres} = 22.873\ \frac{mg}{l}$ MDL = $\frac{33,214,136\ mg}{726,720\ litres} = 45.704\ \frac{mg}{l}$
TSS	AML = $20\frac{mg}{l} = \frac{20\frac{mg}{l} X\ 716,879}{726,720} = 19.727\ \frac{mg}{l}$ MDL = $30\frac{mg}{l} = \frac{30\frac{mg}{l} X\ 716,879}{726,720} = 29.594\ \frac{mg}{l}$ MIL = $45\frac{mg}{l} = \frac{45\frac{mg}{l} X\ 716,879}{726,720} = 44.391\ \frac{mg}{l}$	AML = $\frac{19,856,947\ mg}{726,720\ litres} = 27.324\ \frac{mg}{l}$ MDL = $\frac{38456,971\ mg}{726,720\ litres} = 52.918\ \frac{mg}{l}$
TTO	MIL = 2.13 mg/l = $\frac{2.13\frac{mg}{l} X\ 716,879}{726,720} = 2.101\ \frac{mg}{l}$	
Zinc	AML = $1.0\frac{mg}{l} = \frac{1.0\frac{mg}{l} X\ 716,879}{726,720} = 0.986\ \frac{mg}{l}$ MDL = $2.0\frac{mg}{l} = \frac{2.0\frac{mg}{l} X\ 716,879}{726,720} = 1.973\ \frac{mg}{l}$ MIL = $3.0\frac{mg}{l} = \frac{3.0\frac{mg}{l} X\ 716,879}{726,720} = 2.959\ \frac{mg}{l}$	AML = $\frac{943,222\ mg}{726,720\ litres} = 1.298\ \frac{mg}{l}$ MDL = $\frac{1,664,727\ mg}{726,720\ litres} = 2.291\ \frac{mg}{l}$
AML: Average Monthly Limit	MDL: Maximum Daily Limit	MIL: Maximum Instantaneous Limit

Combined waste stream formula: $C_T = \frac{\sum_{i=1}^{n} C_i F_i}{\sum_{i=1}^{n} F_i} \left\{\frac{F_T - F_D}{F_T}\right\}$

Where C_T = the alternative concentration limit,

C_i = the categorical concentration limit for a pollutant in the regulated stream I,

F_i = the average daily flow of stream i to the extent that it is regulated for such pollutant,

F_D = the average daily flow of stream of dilute waste stream,

F_T = the average daily flow of combined waste stream and

n = the total number of regulated streams.

3.3 BASIS FOR LIMITS

Technology and water-quality based requirements are considered when developing permit limits. Technology-based limits represent the minimum level of control imposed under the Clean Water Act ("CWA"). Industry-specific technology-based limits ("TBELs") are set forth in 40 CFR 405 – 471 (EPA's Effluent Limitation Guidelines) and in RCSA section 22a-430-4(s)(2). Water quality-based limits ("WQBELS") are designed to protect water quality and are determined using the procedures set for in EPA's *Technical Support Document for Water Quality-Based Toxics Control*, 1991 ("TSD"). When both technology and water quality-based limits apply to a particular pollutant, the more stringent limit would apply. In addition, water quality-based limits are required when any pollutant or pollutant parameter (conventional, non-conventional, toxic, and whole effluent toxicity) is or may be discharged at a level that causes, has reasonable potential to cause, or contributes to an excursion above any water quality criteria. Numeric water quality criteria are found in RCSA Section 22a-426-9 of the Connecticut Water Quality Standards ("WQS").

3.4 ZONE OF INFLUENCE

Section 22a-426-4(l) of the Regulations of Connecticut State Agencies states that "The Commissioner may, on a case-by-case basis, establish zones of influence ("ZOI") when authorizing discharges to surface waters under Sections 22a-430 and 22a-133(k) of the CGS in order to allocate a portion of the receiving surface waters for mixing and assimilation of the discharge."

The previously assigned zone of influence of 219,463 gallons per hour ("gph") was carried forward.

The discharge occurs continuously, and the average permitted flow is 192,000 gpd.
The average hourly flow ("AML") = 192,000 gpd ÷ 24 = 8000 gph

$$\text{Instream Waste Concentration (IWC)} = \frac{\text{AML}}{\text{AML+ZOI}} \text{X } 100\% = \frac{8{,}000}{8{,}000 + 219{,}463} = 3.517\% \approx 3.5\%$$

3.5 RESONABLE POTENTIAL ANALYSIS

Pursuant to CWA § 301(b)(1)(C) and 40 CFR § 122.44(d)(1), NPDES permits must contain any requirements in addition to TBELs that are necessary to achieve water quality standards established under § 303 of the CWA. *See also* 33 U.S.C. § 1311(b)(1)(C). In addition, limitations "must control any pollutant or pollutant parameter (conventional, non-conventional, or toxic) which the permitting authority determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard, including State narrative criteria for water quality." 40 CFR § 122.44(d)(1)(i). To determine if the discharge causes, or has the reasonable potential to cause, or contribute to an excursion above any WQS, EPA considers: 1) existing controls on point and non-point sources of pollution; 2) the variability of the pollutant or pollutant parameter in the effluent; 3) the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity); and 4) where appropriate, the dilution of the effluent by the receiving water. *See* 40 CFR § 122.44(d)(1)(ii).

If the permitting authority determines that the discharge of a pollutant will cause, has the reasonable potential to cause, or contribute to an excursion above WQSs, the permit must contain water quality-based effluent limits or require additional monitoring if there is insufficient data to develop a WQBEL, for that pollutant. *See* 40 CFR § 122.44(d)(1)(i). The reasonable potential analysis below indicates that water quality-based limits are needed for chlorine, chromium hexavalent, chromium, copper, lead and zinc.

3.6 WATERBODY AMBIENT CONDITIONS

Table 3.6.1: Waterbody pollutants background concentrations (µg/l)

Pollutants	Mean Naugatuck River concentration from 2019 – 2023 chronic toxicity testing data	Pollutants	Mean Naugatuck River concentration from 2019 – 2023 chronic toxicity testing data
Ammonia	57	Iron	347.6
Cadmium	0	Lead	0
Chlorine	2.73	Methylene chloride	No data
Chromium, hex	0.67	Nickel	0
Chromium	0	Silver	0
Copper	3.4	Zinc	16.3
Cyanide	0	---	---

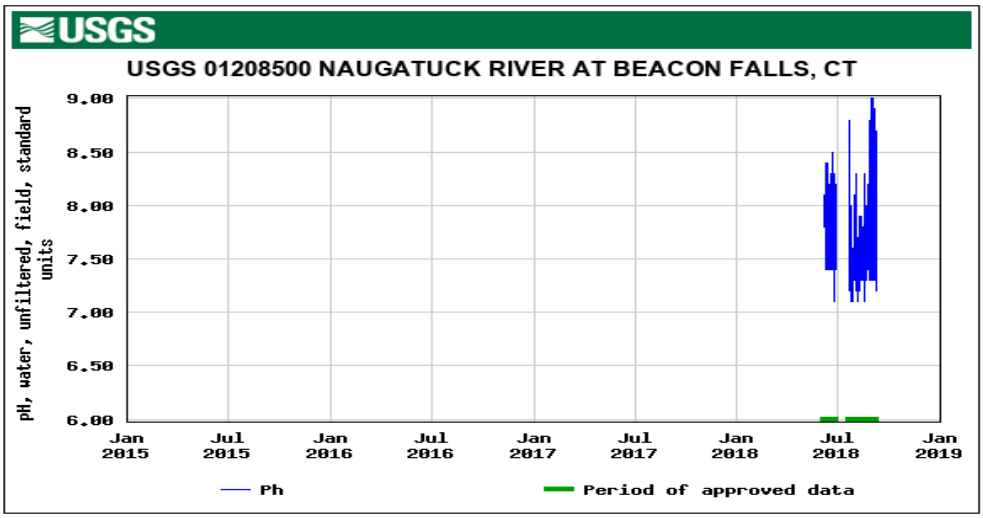
Section 22a-426-9 of the RCSA specifies water quality criteria for ammonia based on the presence or absence of salmonids. Adult Atlantic salmon are stocked in the Naugatuck River each fall (at various times starting in September, pending river conditions); it is one of three river sections designated as "Atlantic Salmon Management Areas"(see Section 26-112-46 (h) of the RCSA). Criteria for ammonia, (mg/L as Nitrogen) vary in response to ambient surface water temperature (T in ºC) and pH. Biological integrity is considered impaired when:

A) One hour average concentraion of total ammonia exceeds: $\left(\left[\frac{0.275}{1+10^{7.204-\mathrm{pH}}}\right]+\left[\frac{39}{1+10^{\mathrm{pH}-7.204}}\right]\right)$

B) Four-day average concentration of total ammonia exceeds: 30-day average x 2.5

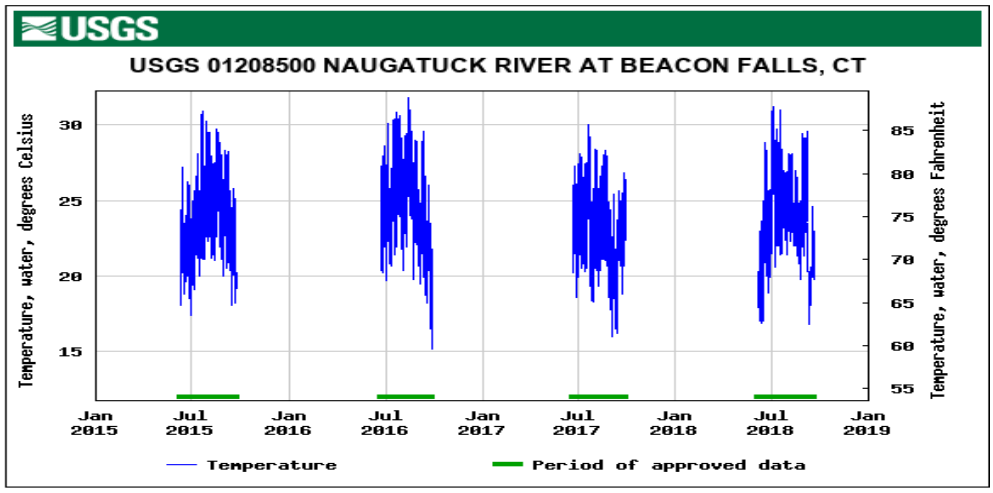
C) 30 day average concentration of total ammonia exceeds: $\left[\frac{0.0577}{1+10^{7.688-\mathrm{pH}}}\right] + \left[\frac{2.487}{1+10^{\mathrm{pH}-7.688}}\right] \text{ x } [1.45 \text{ x } (10^{0.028(25-\mathrm{T})})$

pH data: July 2018 data for Naugatuck River at Beacon Falls (Gage station No. 01208500) and 2019 – 2023 upstream data of Naugatuck River collected with Wieland's chronic toxicity testing:



Minimum: 6.6 S.U.
Maximum: 9 S.U.
Average: 7.5 S.U.

Temperature data: Historic summer temperature data (June 10, 2015, July 2016, July 2017 and July 2018) for Naugatuck River at Beacon Falls (Gage station No. 01208500)



Minimum: 22.5 ºC
Maximum: 31.2 ºC
Average: 26.9 ºC

Acute: One hour average concentraion $= \left(\left[\frac{0.275}{1+10^{7.204-9}}\right] + \left[\frac{39}{1+10^{9-7.204}}\right]\right) = 0.885\frac{\text{mg}}{\text{l}} = 885\frac{\mu\text{g}}{\text{l}}$

Chronic: 30 day average concentration $= \left[\frac{0.0577}{1+10^{7.688-7.5}}\right] + \left[\frac{2.487}{1+10^{7.5-7.688}}\right]$ x $[1.45$ x $\left(10^{0.028(25-31.2)}\right) = 1.489\frac{\text{mg}}{\text{l}} = 1{,}489\frac{\mu\text{g}}{\text{l}}$

Chronic: Four day concentration $=$ 30 day average concentration X 2.5 $= 3.723\frac{\text{mg}}{\text{l}} = 3{,}723\frac{\mu\text{g}}{\text{l}}$

Table 3.7.1: Reasonable Potential Evaluation
(This analysis compares the projected maximum concentration (PMC) in the receiving stream with the applicable water quality criteria (WQC). When the PMC is lower than the WQC, there is no potential for the discharge to exceed the WQC. When the PMC is higher than the WQC, there is a potential for the discharge to exceed the WQC and permit limits are therefore needed.)

Q = Flow, C = Concentration, $(QC)_u$ = Upstream data, $(QC)_d$ = Downstream data, $(QC)_e$ = Effluent data and $Q_d = Q_u + Q_e$. Q_e = 192,000 gpd = 8,000 gph, $Q_{u,ac/ch}$ = 219,463 gph, $Q_{u,he}$ = 438,926 gph, $Q_{d,ac/ch}$ = 227,463 gph and $Q_{d,he}$ = 446,926 gph

Pollutants	PMC in effluent = Maximum measured concentration X multiplier in Attachment C	PMC in the waterbody $C_d = \frac{(QC)_u + (QC)_e}{Q_d}$	Connecticut Water Quality Criteria (WQC) (Freshwater)			Is there potential to exceed WQC?
			Aquatic Life (Acute) (µg/l)	Aquatic Life (Chronic) (µg/l)	Human Health (µg/l)	
Cadmium	This was always below detection level	This was always below detection level	1.0	0.125	10,769	No
Chlorine	210 X 2.6 = 546	21.84	19	11	---	Yes
Chloroform[1]	3 X 6.1 = 18.3	18.3	---	---	470	No
Chromium, hex	50 X 6.8 = 340	12.6	16	11	2,019	Yes
Chromium, total	180 X 6.8 = 1,224	43.05	323	42	1,009,615	Yes
Cyanide	This was always below detection level	This was always below detection level	22	5.2	140	No
Copper	400 X 3.5 = 1,400	52.52	25.7	18.1	1,300	Yes
Lead	10 X 6.8 = 68	2.39	30	1.2	---	Yes
Methylene chloride[1]	3 X 6.8 = 20.4	20.4	---	---	590	No
Nickel	60 X 6.8 = 408	14.35	260.5	28.9	4,600	No
Silver	2 X 6.8 = 13.6	0.48	1.02	---	107,762	No
Zinc	2,380 X 6.8 = 16,184	584.93	65	65	26,000	Yes
			Acute One-day average	Chronic Four-day average	Chronic 30-day average	
Ammonia	290 X 6.8 = 1,972	124.36	885	3,723	1,489	No
EPA's National recommended water quality aquatic life chronic criterion for iron is 1,000 µg/l						
Iron	7,600 X 6.8 = 51,680	2,152.99	---	1,000	---	Yes

[1]No mixing allowed for chloroform and methylene chloride because they are probable or possible carcinogens.

3.7 WATER QUALITY BASED EFFLUENT LIMITATIONS

The CWA and federal regulations require that effluent limitations based on water quality considerations be established for point source discharges when such limitations are necessary to meet state or federal water quality standards that are applicable to the designated receiving water. This is necessary when less stringent TBELs would interfere with the attainment or maintenance of water quality criteria in the receiving water. *See* CWA § 301(b)(1)(C) and 40 CFR §§ 122.44(d)(1),122.44(d)(5), 125.84(e) and 125.94(i).

The reasonable potential analysis in Section 3.5 showed that water quality-based limits are needed for chlorine, chromium hexavalent, chromium, copper, lead and zinc. Therefore, the limits for these pollutants are calculated below.

Table 3.7.2: Permit Limits Calculation

Determine Waste Load Allocation

WLA = Waste load allocation, $(QC)_d$ = Downstream data, $(QC)_u$ = Upstream data, Qe = Discharge flow (see Table 3.7.1 for flow data).

Pollutants	$WLA_{ac} = \frac{(QC)_d - (QC)_u}{Q_e}$	$WLA_{ch} = \frac{(QC)_d - (QC)_u}{Q_e}$	$WLA_{he} = \frac{(QC)_d - (QC)_u}{Q_e}$
Chlorine	465.33	237.87	---
Chromium, hex	436.54	294.38	112,756
Chromium	9,183.82	1,194.18	56,402.90
Copper	637.45	421.36	72,438.93
Iron	--	18,897.21	---
Lead	852.99	34.12	---
Zinc	1,400.98	1,400.98	1,451,615

Determine long term averages and permit limits

LTA = Long term average, AML = Average monthly limit, and MDL = Maximum daily limit

Pollutants	LTA_{acute} = WLA_{ac} X 99th percentile multiplier in Attachment D	$LTA_{chronic}$ = WLA_{ch} X 99th percentile multiplier in Attachment D	Governing LTA	AML = LTA X 95th percentile multiplier in Attachment E	MDL = LTA X 99th percentile multiplier in Attachment E
Chlorine	465.33 X 0.281 = 130.76	237.87 X 0.481 = 114.41	114.4	114.4 X 1.65 ≈ 189	114.4 x 3.56 ≈ 407
Chromium, hex	436.54 X 0.117 = 51.07	294.38 X 0.204 = 60.05	51.07	51.07 X 2.75 ≈ 140	51.07 X 8.55 ≈ 437
Chromium, total	9,183.82 X 0.117 = 1074.51	1,194.18 X 0.204 = 243.61	243.61	243.61 X 2.75 ≈ 670	243.61 X 8.55 ≈ 2083
Copper	637.45 X 0.204 = 130.04	421.36 X 0.373 = 157.17	130.04	130.04 X 1.95 ≈ 254	130.04 X 4.9 ≈ 637
AML (Mass in kg/d) = 254 ug/l X 192,024 gpd X 3.785 (1 gal = 3.785 liters) = 0.185 kg/d MDL (Mass in kg/d) = 637 ug/l X 192,024 gpd X 3.785 (1 gal = 3.785 liters) = 0.463 kg/d					
Iron		18,894.97 X 0.204 = 3,854.57	3,854.57	3,854.57 X 2.75 ≈ 10,600	3,854.57 X 8.55 ≈ 32,957
Lead	852.99 X 0.117 = 99.80	34.12 X 0.204 = 6.96	6.96	6.96 X 2.75 ≈ 19	6.96 X 8.55 ≈ 60
AML (Mass in kg/d) = 19 ug/l X 192,024 gpd X 3.785 (1 gal = 3.785 liters) = 0.014 kg/d MDL (Mass in kg/d) = 60 ug/l X 192,024 gpd X 3.785 (1 gal = 3.785 liters) = 0.044 kg/d					

Zinc	1,400.98 X 0.117 = 163.91	1,400.98 X 0.204 = 285.80	163.91	163.91 X 2.75 ≈ 451	163.91 X 8.55 ≈ 1401
AML (Mass in kg/d) = 451 ug/l X 192,024gpd X 3.785 (1 gal = 3.785 liters) = 0.328 kg/d MDL (Mass in kg/d) = 1,401 ug/l X 192,024gpd X 3.785 (1 gal = 3.785 liters) = 1.018 kg/d					

3.8 WHOLE EFFLUENT TOXICITY

The Permittee shall comply with effluent standards or prohibitions established by CWA § 307(a) and RCSA Section 22a-430-4(l) and may not discharge toxic pollutants in concentrations or combinations that are harmful to humans, animals, or aquatic life.

If toxicity is suspected in the effluent, DEEP may require the Permittee to perform additional acute or chronic whole effluent toxicity testing.

Wieland's previous permit required quarterly acute toxicity testing using *Daphnia pulex* and *Pimephales promelas* and annual chronic toxicity testing using *Ceriodaphnia dubia* and *Pimephales promelas*. The previous permit also had acute toxicity limits of LC_{50} > 70% and no chronic toxicity limit. During the last permit cycle, Wieland had exceedances of its acute toxicity limits in June and December of 2020 and December of 2022. Based on the review of DMR data, the lowest LC_{50} result was 6.25%.

Reasonable Potential Analysis

Acute toxicity shall be assumed to occur at any discharge concentration which exceeds the LC50 concentration determined in an acute toxicity test multiplied by an application factor of 0.33. The projected maximum toxicity is determined by multiplying the maximum toxicity with the multiplier from Appendix C and the dilution factor. A default coefficient of variation of 0.6 is assumed.

$$Acute\ toxic\ unit\ (TU_a) = \frac{100}{LC_{50}}$$

$$TU_a = \frac{100}{6.25} = 16TU_a$$

Projected maximum toxicity = 16 TU_a (highest observed toxicity data) X 2.6 (multiplier in Appendix C) X 0.035 (dilution factor) = 1.46 TU_a, which is higher than EPA's TSD recommended whole effluent toxicity criteria for protection against acute effects: 0.3TU_a. Therefore, there is a reasonable potential of causing toxicity and a limit is needed.

$$\mathrm{DF} = \frac{\mathrm{AML} + \mathrm{ZOI}}{\mathrm{AML}}$$

$$\mathrm{DF} = \frac{219{,}463+8{,}000}{8{,}000} = 28.433$$

$$\mathrm{IWC} = \frac{1}{\mathrm{DF}}\ \mathrm{X}\ 100\% = 3.52\% \approx 3.5\%$$ for acute and chronic criteria

The maximum daily limit for toxicity is based on the concentration that will prevent toxicity within the receiving stream as specified in Section 22a-430-3(j)(7)(B)(i) of the RCSA.

$$\text{Chronically toxic } LC_{50} = \text{Acceptable } LC_{50}\ \mathrm{X}\ 0.05$$

Toxicity test $\frac{LC_{50}}{0.05}$ = non − chronically toxic effluent % at ZOI border
Therefore, the toxicity limit: LC_{50} = IWC X 20 = 3.5 X 20 = 70%.

3.9 COMPARISON OF LIMITS

After preparing and evaluating applicable TBELs (at 40 CFR 468 and 40 CFR 433, and Section 22a-430-4(s)(2) of the RCSA), the effluent limitations are compared with the WQBELs, and the previous permit limitations. The most stringent limits are applied in the permit as shown in the table below.

Table 3.9.1: Comparison of Limits Based on Different Criteria

Pollutants	Adjusted State Limits Based on Section 22a-430-4(s)(2) of the RCSA (See Table 3.2.5)	Adjusted Federal Reg. Limits 40 CFR 433 and 40 CFR 468 Subpart A (Using the combined waste-stream formula) (See Table 3.2.5)	Water Quality-Based Effluent Limits Based on EPA/505/2-90-001 (See Table 3.7.1)	Previous permit limits
Aluminum	AML = 1.973 $\frac{mg}{l}$ MDL = 3.946 $\frac{mg}{l}$ MIL = 5.919 $\frac{mg}{l}$	NA		NA
Cadmium	AML = 0.099 $\frac{mg}{l}$ MDL = 0.493 $\frac{mg}{l}$ MIL = 0.740 $\frac{mg}{l}$	AML = 0.256 $\frac{mg}{l}$ (40 CFR 433 only) MDL = 0.681 $\frac{mg}{l}$ (40 CFR 433 only)		AML = 0.1 $\frac{mg}{l}$ AML = 0.0208 $\frac{kg}{d}$ MDL = 0.5 $\frac{mg}{l}$ MDL = 0.0418 $\frac{kg}{d}$ MIL = 0.75 $\frac{mg}{l}$
Chlorine	NA	NA	AML = 0.189 $\frac{mg}{l}$ MDL = 0.407 $\frac{mg}{l}$ MIL = 0.611 $\frac{mg}{l}$ (BPJ)	AML = 0.256 $\frac{mg}{l}$ MDL = 0.514 $\frac{mg}{l}$ MIL = 0.771 $\frac{mg}{l}$
Chromium hexavalent	AML = 0.099 $\frac{mg}{l}$ MDL = 0.197 $\frac{mg}{l}$ MIL = 0.296 $\frac{mg}{l}$		AML = 0.140 $\frac{mg}{l}$ MDL = 0.437 $\frac{mg}{l}$ MIL = 0.656 $\frac{mg}{l}$ (BPJ)	AML = 0.1 $\frac{mg}{l}$ MDL = 0.2 $\frac{mg}{l}$ MIL = 0.3 $\frac{mg}{l}$
Chromium	AML = 0.986 $\frac{mg}{l}$ MDL = 1.972 $\frac{mg}{l}$ MIL = 2.959 $\frac{mg}{l}$	AML = 1.497 $\frac{mg}{l}$ MDL = 2.426 $\frac{mg}{l}$	AML = 0.67 $\frac{mg}{l}$ MDL = 2.083 $\frac{mg}{l}$ MIL = 3.12 $\frac{mg}{l}$ (BPJ)	AML = 0.95 $\frac{mg}{l}$ MDL = 1.89 $\frac{mg}{l}$ MIL = 2.84 $\frac{mg}{l}$
Copper	AML = 0.986 $\frac{mg}{l}$ MDL = 1.973 $\frac{mg}{l}$ MIL = 2.959 $\frac{mg}{l}$	AML = 1.816 $\frac{mg}{l}$ MDL = 2.967 $\frac{mg}{l}$	AML = 0.254 $\frac{mg}{l}$ AML = 0.184 $\frac{kg}{d}$ MDL = 0.637 $\frac{mg}{l}$ MDL = 0.463 $\frac{kg}{d}$ MIL = 0.956 $\frac{mg}{l}$ (BPJ)	AML = 0.96 $\frac{mg}{l}$ AML = 0.265 $\frac{kg}{d}$ MDL = 1.92 $\frac{mg}{l}$ MDL = 0.531 $\frac{kg}{d}$ MIL = 2.88 $\frac{mg}{l}$
Cyanide	AML = 0.641 mg/l MDL = 1.184 mg/l	AML = 0.65 mg/l (40 CFR 433 only) MDL = 1.2 mg/l (40 CFR 433 only)		MDL = 1.2 mg/l

Table 3.9.1: Comparison of Limits Based on Different Criteria				
Pollutants	Adjusted State Limits Based on Section 22a-430-4(s)(2) of the RCSA (See Table 3.2.5)	Adjusted Federal Reg. Limits 40 CFR 433 and 40 CFR 468 Subpart A (Using the combined waste-stream formula) (See Table 3.2.5)	Water Quality-Based Effluent Limits Based on EPA/505/2-90-001 (See Table 3.7.1)	Previous permit limits
Fluoride				AML = 20 $\frac{mg}{l}$ MDL = 30 $\frac{mg}{l}$ MIL = 45 $\frac{mg}{l}$
Iron	AML = 2.959 $\frac{mg}{l}$ MDL = 4.932 $\frac{mg}{l}$ MIL = 7.398 $\frac{mg}{l}$		AML = 10.6 $\frac{mg}{l}$ MDL = 32.96 $\frac{mg}{l}$	AML = 3 $\frac{mg}{l}$ MDL = 5 $\frac{mg}{l}$ MIL = 7.5 $\frac{mg}{l}$
Lead	AML = 0.099 $\frac{mg}{l}$ MDL = 0.493 $\frac{mg}{l}$ MIL = 0.740 $\frac{mg}{l}$	AML = 0.377 $\frac{mg}{l}$ MDL = 0.604 $\frac{mg}{l}$	AML = 0.019 $\frac{mg}{l}$ AML = 0.014 $\frac{kg}{d}$ MDL = 0.06 $\frac{mg}{l}$ MDL = 0.044 $\frac{kg}{d}$ MIL = 0.09 $\frac{mg}{l}$ (BPJ)	AML = 0.1 $\frac{mg}{l}$ AML = 0.0203 $\frac{kg}{d}$ MDL = 0.4 $\frac{mg}{l}$ MDL = 0.0408 $\frac{kg}{d}$ MIL = 0.6 $\frac{mg}{l}$
Nickel	AML = 0.986 $\frac{mg}{l}$ MDL = 1.973 $\frac{mg}{l}$ MIL = 2.959 $\frac{mg}{l}$	AML = 2.094 $\frac{mg}{l}$ MDL = 3.50 $\frac{mg}{l}$		AML = 0.97 $\frac{mg}{l}$ AML = 0.489 $\frac{kg}{d}$ MDL = 1.92 $\frac{mg}{l}$ MDL = 0.982 $\frac{kg}{d}$ MIL = 2.88 $\frac{mg}{l}$
O&G	AML = 9.864 $\frac{mg}{l}$ MIL = 19.729 $\frac{mg}{l}$			AML = 10 $\frac{mg}{l}$ MDL = 15 $\frac{mg}{l}$ MIL = 20 $\frac{mg}{l}$
pH		6.0 – 9.0 standard units (40 CFR 433)	6.8 – 8.5 standard units	6.0 – 9.0
Silver	AML = 0.099 mg/l MDL = 0.493 mg/l MIL = 0.740 mg/l	AML = 0.237 mg/l MDL = 0.424 mg/l (40 CFR 433 only)		AML = 0.1 $\frac{mg}{l}$ AML = 0.0105 $\frac{kg}{d}$ MDL = 0.43 $\frac{mg}{l}$ MDL = 0.0211 $\frac{kg}{d}$ MIL = 0.645 $\frac{mg}{l}$
TSS	AML = 19.727 $\frac{mg}{l}$ MDL = 29.594 $\frac{mg}{l}$ MIL = 44.391 $\frac{mg}{l}$	ML = 27.5324 $\frac{mg}{l}$ MDL = 52.918 $\frac{mg}{l}$		AML = 20 $\frac{mg}{l}$ MDL = 30 $\frac{mg}{l}$ MIL = 45 $\frac{mg}{l}$
TTO	MIL = 2.101 mg/l	MIL = 2.13 mg/l (40 CFR 433 only)		MIL = 0.06 $\frac{mg}{l}$
Zinc	AML = 0.986 $\frac{mg}{l}$ MDL = 1.973 $\frac{mg}{l}$	AML = 1.2981 $\frac{mg}{l}$ MDL = 2.291 $\frac{mg}{l}$	AML = 0.45 $\frac{mg}{l}$ AML = 0.328 $\frac{kg}{d}$	AML = 0.96 $\frac{mg}{l}$ AML = 0.67 $\frac{kg}{d}$

Table 3.9.1: Comparison of Limits Based on Different Criteria				
Pollutants	Adjusted State Limits Based on Section 22a-430-4(s)(2) of the RCSA (See Table 3.2.5)	Adjusted Federal Reg. Limits 40 CFR 433 and 40 CFR 468 Subpart A (Using the combined waste-stream formula) (See Table 3.2.5)	Water Quality-Based Effluent Limits Based on EPA/505/2-90-001 (See Table 3.7.1)	Previous permit limits
	MIL = 2.959 $\frac{mg}{l}$		MDL = 1.40 $\frac{mg}{l}$ MDL = 1.018 $\frac{kg}{d}$ MIL = 2.1 $\frac{mg}{l}$ (BPJ)	MDL = 1.91 $\frac{mg}{l}$ MDL = 1.34 $\frac{kg}{d}$ MIL = 2.87 $\frac{mg}{l}$
Note: The highlighted numbers represent the most stringent effluent limits. AML: Average Monthly Limit, MDL: Maximum Daily Limit, MIL: Maximum Instantaneous Limit, BPJ: Best Professional Judgement				

3.10 MONITORING FREQUENCY

RCSA Section 22a-430-3(j) prescribes weekly monitoring for metal finishing and copper forming wastewaters. The sampling frequencies for chromium, copper, iron, nickel, oil and grease, pH, total suspended solids and zinc, contained in the permit are consistent with RCSA Sections 22a-430-3(j)(3). The acute toxicity monitoring is also consistent with RCSA Section 22a-430-3(j). Monthly, quarterly and annual monitoring were included for the rest of pollutants based on Best Professional Judgement and are consistent with the previous permit.

3.11 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

POLLUTANTS	LIMIT	BASIS FOR LIMIT	MONITORING/ REPORTING FREQUENCY
LC50 Static 48 Hr Acute Toxicity, *Daphnia pulex*	≥ 70%	Consistent with RCSA 22a-430-3(j)(7)(B)(i).	Quarterly
LC50 Static 48 Hr Acute Toxicity *Pimephales promelas*	≥ 70%	Consistent with RCSA 22a-430-3(j)(7)(B)(i).	Quarterly
Chronic Aquatic Toxicity (Survival) *Ceriodaphnia dubia*	Monitoring only requirement.	Case-by-case determination using BPJ.	Annually
Chronic Aquatic Toxicity (Reproduction) *Ceriodaphnia dubia*	Monitoring only requirement.	Case-by-case determination using BPJ.	Annually
Chronic Aquatic Toxicity (Survival) *Pimephales promelas*	Monitoring only requirement.	Case-by-case determination using BPJ.	Annually
Chronic Aquatic Toxicity (Growth) *Pimephales promelas*	Monitoring only requirement.	Case-by-case determination using BPJ.	Annually
Aluminum, total	AML = 1.972 mg/l MDL = 3.945 mg/l MIL = 5.918 mg/l	RCSA 22a-430-4(s) adjusted limits using combined waste stream formula.	Weekly/Monthly
Ammonia as N, total	Monitoring only requirement based on BPJ.	No RP to cause exceedance of WQC.	Quarterly

POLLUTANTS	LIMIT	BASIS FOR LIMIT	MONITORING/ REPORTING FREQUENCY
Biochemical Oxygen Demand (5-day)	Monitoring only requirement.	Case-by-case determination using BPJ.	Quarterly
Cadmium, total	AML = 0.099 mg/l MDL = 0.493 mg/l MIL = 0.740 mg/l AML = 0.0208 kg/d MDL = 0.0418 kg/d	RCSA 22a-430-4(s) adjusted limits using combined waste stream formula. Anti-backsliding Anti-backsliding	Quarterly
Chlorine, total residual	AML = 0.189 mg/l MDL = 0.408 mg/l MIL = 0.611 mg/l	To meet in-stream WQS To meet in-stream WQS BPJ – multiplied MDL by a factor of 1.5 consistent with RCSA 22a-430-4(s))	Monthly
Chloroform	Monitoring only requirement based on BPJ.	No RP to cause exceedance of WQC.	Quarterly
Chromium, hexavalent	AML = 0.099 mg/l MDL = 0.197 mg/l MIL = 0.296 mg/l	RCSA 22a-430-4(s) adjusted limits using combined waste stream formula.	Monthly
Chromium, total	AML = 0.670 mg/l MDL = 1.890 mg/l MIL = 2.840 mg/l	To meet in-stream WQS. Anti-backsliding regulations. Anti-backsliding regulations.	Weekly/Monthly
Copper, total	AML = 0.254 mg/l AML = 0.184 kg/d MDL = 0.637 mg/l MDL = 0.463 kg/d MIL = 0.956 mg/l	To meet in-stream WQS. To meet in-stream WQS. To meet in-stream WQS. To meet in-stream WQS. BPJ – multiplied MDL by a factor of 1.5 consistent with RCSA 22a-430-4(s).	Weekly/Monthly
Cyanide, total	AML = 0.641 mg/l MDL = 1.184 mg/l MDL = 1.2 mg/l	RCSA 22a-430-4(s) adjusted limits using combined waste stream formula. Anti-backsliding regulations.	Annually
Flow rate (Average daily)	192,000 gpd	Permitted discharge flow per application.	Daily/Monthly
Flow, Maximum during 24 hr. period	288,000 gpd	Permitted discharge flow per application.	Daily/Monthly
Fluoride, total	AML = 20 mg/l MDL = 30 mg/l MIL = 45 mg/l	To meet in-stream WQS. To meet in-stream WQS. To meet in-stream WQS.	Quarterly
Iron, total	AML = 2.959 mg/l MDL = 4.932 mg/l MIL = 7.398 mg/l	RCSA 22a-430-4(s) adjusted limits using combined waste stream formula.	Weekly/Monthly

POLLUTANTS	LIMIT	BASIS FOR LIMIT	MONITORING/ REPORTING FREQUENCY
Kjeldahl Nitrogen, Total (as N)	Monitoring only requirement.	Case-by-case determination using BPJ.	Quarterly
Lead, total	AML = 0.019 mg/l AML = 0.014 kg/d MDL = 0.060 mg/l MDL = 0.0408 kg/d MIL = 0.090 mg/l	To meet in-stream WQS. To meet in-stream WQS. To meet in-stream WQS. Anti-backsliding regulations. BPJ – multiplied MDL by a factor of 1.5 consistent with RCSA 22a-430-4(s).	Monthly
Methylene Chloride	Monitoring only requirement based on BPJ.	No RP to cause exceedance of WQC.	Quarterly
Nickel, total	AML = 0.970 mg/l AML = 0.489 kg/d MDL = 1.920 mg/l MDL = 0.982 kg/d MIL = 2.88 mg/l	Anti-backsliding regulations. Anti-backsliding regulations. Anti-backsliding regulations. Anti-backsliding regulations. Anti-backsliding regulations	Weekly/Monthly
Nitrates (as N)	Monitoring only requirement.	Case-by-case determination using BPJ.	Quarterly
Nitrites (as N)	Monitoring only requirement.	Case-by-case determination using BPJ.	Quarterly
Oil & Grease, total	AML = 9.860 mg/l MIL = 19.720 mg/l MDL = 15.000 mg/l	RCSA 22a-430-4(s) adjusted limits using combined waste stream formula. Anti-backsliding regulations.	Weekly/Monthly
pH	6.8 – 8.5	WQC	Weekly/Monthly
Phosphorus, total	Monitoring only requirement.	Case-by-case determination using BPJ.	Quarterly
Silver, total	AML = 0.099 mg/l AML = 0.0105 kg/d MDL = 0.424 mg/l MDL = 0.0211 kg/d MIL = 0.645 mg/l	RCSA 22a-430-4(s) adjusted limits using combined waste stream formula) Anti-backsliding regulations. 40 CFR 433 adjusted limits using combined waste stream formula. Anti-backsliding regulations. Anti-backsliding regulations.	Monthly
Solids, total dissolved	Monitoring only requirement.	Case-by-case determination using BPJ.	Quarterly
Solids, total suspended	AML = 19.727 mg/l MDL = 29.590 mg/l MIL = 44.385 mg/l	RCSA 22a-430-4(s) adjusted limits using combined waste stream formula.	Weekly/Monthly
Surfactants, anionic (MBAS)	Monitoring only requirement.	Case-by-case determination using BPJ.	Quarterly
Total Toxic Organics	MIL = 0.060 mg/l	Anti-backsliding regulations.	Monthly

POLLUTANTS	LIMIT	BASIS FOR LIMIT	MONITORING/ REPORTING FREQUENCY
Zinc, total	AML = 0.450 mg/l AML = 0.328 kg/d MDL = 1.400 mg/l MDL = 1.018 kg/d MIL = 2.100 mg/l	To meet in-stream WQS. To meet in-stream WQS. To meet in-stream WQS. To meet in-stream WQS. BPJ – multiplied MDL by a factor of 1.5 consistent with RCSA 22a-430-4(s)).	Weekly/Monthly
AML: Average Monthly Limit BPJ: Best Professional Judgment RP: Reasonable potential	MDL: Maximum Daily Limit BPT: Best Practicable Control Technology Currently Available WQC: Water quality criteria	MIL: Maximum Instantaneous Limit	

3.12 COMPLIANCE SCHEDULE

The permit has a compliance schedule that follows the requirements found under 40 CFR 122.47 and RSCA Section 22a-430-4(l)(3).

DEEP is requiring effluent monitoring for Per- and polyfluoroalkyl substances (PFAS) in certain discharges to support further regulatory evaluations regarding the identification of contributing sources of such substances to the state's surface waters. The Permittee operates under SIC codes 3351 and 3316 and has been identified as a potential source of PFAS in accordance with DEEP's Industrial NPDES and Pretreatment PFAS Roadmap (https://portal.ct.gov/-/media/deep/water_regulating_and_discharges/industrial_wastewater/2023-09-30-wped-pfas-roadmap.pdf).

As such, this permit contains a compliance schedule requiring the Permittee to develop, submit for approval, and implement a PFAS monitoring and sampling plan to ensure data is representative and undergoes proper quality control and assurance. The industrial classification has been identified as a potential source and the effluent will be sampled to characterize the discharge.

3.13 ANTIDEGRADATION

Implementation of the Antidegradation Policy follows a tiered approach pursuant to the federal regulations (40 CFR 131.12) and consistent with the Connecticut Antidegradation Policy included in the Connecticut Water Quality Standards (Section 22a-426-8(b-f) of the RSCA). Tier 1 Antidegradation review applies to all existing permitted discharge activities to all waters of the state. Tiers 1 and 2 Antidegradation reviews apply to new or increased discharges to high quality waters and wetlands, while Tiers 1 and 3 Antidegradation reviews apply to new or increased discharges to outstanding national resource waters.

This discharge is an existing discharge, and the Permittee does not propose an increase in volume or concentration of constituents. Therefore, only the Tier 1 Antidegradation Evaluation and Implementation Review was conducted to ensure that existing and designated uses of surface waters and the water quality necessary for their protection are maintained and preserved, consistent with Connecticut Water Quality Standards, RCSA Sec.22a-426-8(a)(1).

The Tier I review, as documented in Section 3.3 – 3.11 of this fact sheet, involved the following:

- An evaluation of narrative and numeric water quality standards, criteria and associated policies;
- Consideration of the discharge activity both independently and in the context of other dischargers in the affected waterbodies; and
- Consideration of any impairment listed pursuant to Section 303d of the federal Clean Water Act or any TMDL established for the waterbody.

Compliance with all the terms and conditions in the new permit would ensure that existing and designated uses of surface waters and the water quality necessary for their protection are maintained and preserved.

3.14 ANTI-BACKSLIDING

This permit has effluent limitations, standards or conditions that are at least as stringent as the final effluent limitations, standards, or conditions in the previous permit as required in 40 CFR 122.44(l) and RCSA Section 22a-430-4(l)(4)(A)(xxiii).

3.15 CATEGORICAL DISCHARGE CONDITIONS

For Total Toxic Organics (TTO) monitoring, the Permittee may, in lieu of analyzing for TTO, include statement on each DMR certifying compliance with its approved solvent management plan. This certification statement is set forth in 40 CFR 433.12. If such approval had been granted and the reports include the compliance statement, the minimum frequency of sampling shall be reduced to annually in the month of October.

3.16 VARIANCES AND WAIVERS

The facility did not request a variance or a waiver.

3.17 E-REPORTING

The Permittee is required to electronically submit documents in accordance with 40 CFR Part 127.

SECTION 4 SUMMARY OF CHANGES MADE TO NEW PERMIT

The changes made to the permit are as noted below.

- Monitoring requirements are included for aluminum, nitrates, nitrites, and total Kjeldahl nitrogen because they are expected to be present in the wastewater.
- AML, MDL and MIL concentration limits for cadmium, total residual chlorine, total chromium, hexavalent chromium, copper, iron, silver, and total suspended solids were changed (see Table 3.9.1 and Section 3.11 of the fact sheet).
- AML, MDL and MIL concentration and mass limits for lead and zinc were changed (see Table 3.9.1 and Section 3.11 of the fact sheet).
- AML and MDL concentration limits were added for cyanide (see Table 3.9.1 and Section 3.11 of the fact sheet).
- MIL for pH was changed from 6.0 – 9.0 to 6.8 – 8.5 S.U. consistent with the water quality criteria for a class B waterbody.

- Inclusion of compliance schedules requiring the Permittee to achieve compliance with the pH effluent limitations in Section 5 of the proposed permit, and develop, submit for approval, and implement a PFAS monitoring.

A review of the discharge monitoring reports from 2019 to 2023 showed that the Permittee can meet the proposed effluent limits except for pH. Changes in pH of treated wastewater could impact the removal of metals in wastewater, therefore, a 12-month period compliance schedule was included in the permit to provide enough time for the Permittee to evaluate and decide on the treatment option that will ensure compliance with the pH limits of 6.8 – 8.5 S.U.

SECTION 5 PUBLIC PARTICIPATION PROCEDURES

On October 22, 2024, the Department of Energy & Environmental Protection's (DEEP) Water Permitting & Enforcement Division (WPED) published notice of its tentative decision to reissue the National Pollutant Discharge Elimination System Permit (NPDES) for Wieland Rolled Products North America, LLC in the Waterbury Republican-American newspaper. The notice of tentative decision as well as a draft copy of the permit and its fact sheet were concurrently posted on DEEP's website. The notice provided a thirty-day public comment period.

DEEP received no written comments and no revisions were made to the final proposed permit.

ATTACHMENT A

Average Daily Precipitation Based on New Haven County Precipitation Data

Naugatuck station is the closest to the Wieland facility.
5-year precipitation = 272.61 inches, 5 years = (365 + 366 + 365 + 365 + 365) days = 1826 days
Average daily precipitation = 272.61 ÷ 1826 = 0.1493 ≈ 0.15 inches
0.15 inches ÷ 12 = 0.0125 ft
The holding tank has a diameter of 18 feet: radius = diameter/2 = 9 ft
Total volume V= πr^2h where r is the radius of the holding tank and h is the precipitation in ft.
Volume = $\frac{22}{7}$ X 9 X 9 X 0.0125 = 3.182 ft^3 X 7.48 = 23.8 gallons ≈ 24 gallons.

View Data : Station Report Summary US Units

Station Report Summary

Station 1 : CT-NH-43 Example: CO-LR-273
Station 2 : CT-NH-45
Station 3 : Ct-NH-75
Start Date: 1/1/2019 End Date: 12/31/2023
Get Summary

Stations:		
CT-NH-43 Wallingford Center 3.3 NNW Lat: 41.49109 Lon: -72.85065	CT-NH-45 Naugatuck 1.7 NNE Lat: 41.511 Lon: -73.036959	CT-NH-75 Meriden 2.8 WSW Lat: 41.525841 Lon: -72.846985

* indicates Multi-Day Accumulation Report

Station	CT-NH-43	CT-NH-45	CT-NH-75
Date	Precip in.	Precip in.	Precip in.
12/29/2023	0.07	0.18	0.84
12/30/2023	0.01	0.04	0.08
12/31/2023	T	0.03	0.01
Totals :	275.79 in.	272.61 in.	191.47 in.

CoCoRaHS - Community Collaborative Rain, Hail & Snow Network

ATTACHMENT B
Federal And State Effluent Limitations

Regulations of Connecticut State Agencies Section 22a -430-4(s)(2)

Parameter	Allowable Effluent Concentrations (mg/l)		
	Average Monthly	Maximum Daily	Maximum Instantaneous
Aluminum	2.0	4.0	6.0
Cadmium	0.1 (0.07)	0.5 (0.11)	0.75
Chromium, Hexavalent	0.1	0.2	0.3
Chromium, Total	1.0	2.0	3.0
Copper	1.0	2.0	3.0
Cyanide, Amenable	0.1	0.2	0.3
Cyanide, Total	0.65	1.2	-
Iron	3.0	5.0	7.5
Lead	0.1	0.5	0.75
Nickel	1.0	2.0	3.0
Silver	0.1	0.5	0.75
Zinc	1.0	2.0	3.0
Total Suspended Solids	20.0	30.0	45.0
Oil and Grease	10.0	-	20.0

Federal limits are based on 40 CFR 433, Metal Finishing

BPT and BAT Effluent Limitations

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.69	0.26
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	

Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to those limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified above:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

BPT Effluent Limitations Continued

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Oil & Grease	52	26
TSS	60	31
pH	([1])	([1])

[1] Within 6.0 to 9.0.

Federal limits are based on 40 CFR 468, Copper Forming (7500 lbs = 3402 kg of copper strip per day)

Subpart A - Pickling Rinse BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/off-kg of copper or copper alloy pickled	
	English units - pounds per/1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	1.593	0.651
Copper	6.881	3.622
Lead	0.543	0.470
Nickel	6.954	4.599
Zinc	5.288	2.209
Oil and grease	72.440	43.464
TSS	148.502	70.629
pH	([1])	([1])

Subpart A - Pickling Bath BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/off-kg of copper or copper alloy pickled	
	English units - pounds per 1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.051	0.020
Copper	0.220	0.116
Lead	0.017	0.015
Nickel	0.222	0.147
Zinc	0.169	0.070
Oil and grease	2.320	1.392
TSS	4.756	2.262
pH	([1])	([1])

Subpart A - Pickling Fume Scrubber BPT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/off-kg of copper or copper alloy pickled	
	English units - pounds per 1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.275	0.112
Copper	1.189	0.626
Lead	0.093	0.081
Nickel	1.201	0.795
Zinc	0.913	0.381
Oil and grease	12.520	7.512
TSS	25.666	12.207
pH	([1])	([1])

[1] Within the range of 7.5 to 10.0 at all times.

Subpart A - Pickling Rinse BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric Units - mg/off-kg of copper or copper alloy pickled	
	English Units - pounds per 1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.574	0.235
Copper	2.481	1.306
Lead	0.195	0.169
Nickel	2.507	1.658
Zinc	1.906	0.796

Subpart A - Pickling Bath BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/off-kg of copper or copper alloy pickled	
	English units - pounds per 1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.051	0.020
Copper	0.220	0.116
Lead	0.017	0.015
Nickel	0.222	0.147
Zinc	0.169	0.070

Subpart A - Pickling Fume Scrubber BAT Effluent Limitations.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	Metric units - mg/off-kg of copper or copper alloy pickled	
	English units - pounds per 1,000,000 off-pounds of copper or copper alloy pickled	
Chromium	0.275	0.112
Copper	1.189	0.626
Lead	0.093	0.081
Nickel	1.201	0.795
Zinc	0.913	0.381

ATTACHMENT C
Reasonable Potential Statistical Multiplier (Table 3-1 of TSD EPA/505/2-90-001)

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

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

ATTACHMENT D

WLA Statistical Multipliers from (Table 5-1 of TSD EPA/505/2-90-001)

Table 5-1. Back Calculations of Long-Term Average

CV	WLA Multipliers $e^{[0.5\sigma^2 - z\sigma]}$	
	95th Percentile	99th Percentile
0.1	0.853	0.797
0.2	0.736	0.643
0.3	0.644	0.527
0.4	0.571	0.440
0.5	0.514	0.373
0.6	0.468	0.321
0.7	0.432	0.281
0.8	0.403	0.249
0.9	0.379	0.224
1.0	0.360	0.204
1.1	0.344	0.187
1.2	0.330	0.174
1.3	0.319	0.162
1.4	0.310	0.153
1.5	0.302	0.144
1.6	0.296	0.137
1.7	0.290	0.131
1.8	0.285	0.126
1.9	0.281	0.121
2.0	0.277	0.117

Acute

$$LTA_{a,c} = WLA_{a,c} * e^{[0.5\sigma^2 - z\sigma]}$$

where $\sigma^2 = ln[CV^2 + 1]$,
z = 1.645 for 95th percentile occurrence probability, and
z = 2.326 for 99th percentile occurrence probability

Chronic
(4-day average)

$$LTA_c = WLA_c * e^{[0.5\sigma_4^2 - z\sigma_4]}$$

where $\sigma_4^2 = ln[CV^2/4 + 1]$,
z = 1.645 for 95th percentile occurrence probability, and
z = 2.326 for 99th percentile occurrence probability

CV	WLA Multipliers $e^{[0.5\sigma_4^2 - z\sigma_4]}$	
	95th Percentile	99th Percentile
0.1	0.922	0.891
0.2	0.853	0.797
0.3	0.791	0.715
0.4	0.736	0.643
0.5	0.687	0.581
0.6	0.644	0.527
0.7	0.606	0.481
0.8	0.571	0.440
0.9	0.541	0.404
1.0	0.514	0.373
1.1	0.490	0.345
1.2	0.468	0.321
1.3	0.449	0.300
1.4	0.432	0.281
1.5	0.417	0.264
1.6	0.403	0.249
1.7	0.390	0.236
1.8	0.379	0.224
1.9	0.369	0.214
2.0	0.360	0.204

ATTACHMENT E
LTA Statistical Multipliers from (Table 5-2 of TSD EPA/505/2-90-001)

Table 5-2. Calculation of Permit Limits

CV	LTA multipliers $e^{[z\sigma - 0.5\sigma^2]}$	
	95th Percentile	99th Percentile
0.1	1.17	1.25
0.2	1.36	1.55
0.3	1.55	1.90
0.4	1.75	2.27
0.5	1.95	2.68
0.6	2.13	3.11
0.7	2.31	3.56
0.8	2.48	4.01
0.9	2.64	4.46
1.0	2.78	4.90
1.1	2.91	5.34
1.2	3.03	5.76
1.3	3.13	6.17
1.4	3.23	6.56
1.5	3.31	6.93
1.6	3.38	7.29
1.7	3.45	7.63
1.8	3.51	7.95
1.9	3.56	8.26
2.0	3.60	8.55

Maximum Daily Limit

$MDL = LTA \cdot e^{[z\sigma - 0.5\sigma^2]}$

where $\sigma^2 = ln[CV^2 + 1]$,
z = 1.645 for 95th percentile occurrence probability, and
z = 2.326 for 99th percentile occurrence probability

Average Monthly Limit

$AML = LTA \cdot e^{[z\sigma_n - 0.5\sigma_n^2]}$

where $\sigma_n^2 = ln[CV^2/n + 1]$,
z = 1.645 for 95th percentile,
z = 2.326 for 99th percentile, and
n = number of samples/month

CV	LTA Multipliers $e^{[z\sigma_n - 0.5\sigma_n^2]}$									
	95th Percentile					99th Percentile				
	n=1	n=2	n=4	n=10	n=30	n=1	n=2	n=4	n=10	n=30
0.1	1.17	1.12	1.08	1.06	1.03	1.25	1.18	1.12	1.08	1.04
0.2	1.36	1.25	1.17	1.12	1.06	1.55	1.37	1.25	1.16	1.09
0.3	1.55	1.38	1.26	1.18	1.09	1.90	1.59	1.40	1.24	1.13
0.4	1.75	1.52	1.36	1.25	1.12	2.27	1.83	1.55	1.33	1.18
0.5	1.95	1.66	1.45	1.31	1.16	2.68	2.09	1.72	1.42	1.23
0.6	2.13	1.80	1.55	1.38	1.19	3.11	2.37	1.90	1.52	1.28
0.7	2.31	1.94	1.65	1.45	1.22	3.56	2.66	2.08	1.62	1.33
0.8	2.48	2.07	1.75	1.52	1.26	4.01	2.96	2.27	1.73	1.39
0.9	2.64	2.20	1.85	1.59	1.29	4.46	3.28	2.48	1.84	1.44
1.0	2.78	2.33	1.95	1.66	1.33	4.90	3.59	2.68	1.96	1.50
1.1	2.91	2.45	2.04	1.73	1.36	5.34	3.91	2.90	2.07	1.56
1.2	3.03	2.56	2.13	1.80	1.39	5.76	4.23	3.11	2.19	1.62
1.3	3.13	2.67	2.23	1.87	1.43	6.17	4.55	3.34	2.32	1.68
1.4	3.23	2.77	2.31	1.94	1.47	6.56	4.86	3.56	2.45	1.74
1.5	3.31	2.86	2.40	2.00	1.50	6.93	5.17	3.78	2.58	1.80
1.6	3.38	2.95	2.48	2.07	1.54	7.29	5.47	4.01	2.71	1.87
1.7	3.45	3.03	2.56	2.14	1.57	7.63	5.77	4.23	2.84	1.93
1.8	3.51	3.10	2.64	2.20	1.61	7.95	6.06	4.46	2.98	2.00
1.9	3.56	3.17	2.71	2.27	1.64	8.26	6.34	4.68	3.12	2.07
2.0	3.60	3.23	2.76	2.33	1.68	8.55	6.61	4.90	3.26	2.14

Final Determination & Recommendation

Date: December 5, 2024

To: Jennifer L. Perry, P.E., Chief,
Bureau of Materials Management & Compliance Assurance

Thru: Audra Dickson, Director, Water Permitting and Enforcement
Nick Giannetti, Supervisor, Industrial NPDES Permitting Program

From: Oluwatoyin Fakilede, Environmental Engineer 3, Industrial NPDES Permitting Program

Re: Final Determination & Recommendation to renew the NPDES Permit to Wieland Rolled Products North America, LLC (Permit No. CT0021873).

1.0 Permit Authorization & Public Participation

On October 22, 2024, the Department of Energy & Environmental Protection's (DEEP) Water Permitting & Enforcement Division (WPED) published notice of its tentative decision to reissue the National Pollutant Discharge Elimination System Permit (NPDES) for Wieland Rolled Products North America, LLC in the Waterbury Republican-American newspaper. The notice of tentative decision as well as a draft copy of the permit and its fact sheet were concurrently posted on DEEP's website. The notice provided a thirty-day public comment period.

DEEP received no written comments and no revisions were made to the final proposed permit.

2.0 Proposed Changes in the Reissuance

The following changes were made from the previous permit (see Table 3.9.1 and Section 3.11 of the fact sheet).

- Monitoring requirements are included for aluminum, nitrates, nitrites, and total Kjeldahl nitrogen because they are expected to be present in the wastewater.
- Average monthly limit (AML), maximum daily limit (MDL) and maximum instantaneous limit (MIL) concentration limits for cadmium, total chromium, hexavalent chromium, iron, silver, and total suspended solids effluent limits were adjusted using the combined waste stream formula.
- AML, MDL and MIL concentration limits for copper and total residual chlorine were also changed to water quality-based effluent limits.
- AML, MDL and MIL concentration and mass limits for lead and zinc were changed to water quality-based effluent limits.
- Adjusted AML and MDL concentration limits based on the combined waste stream formula were added for cyanide.

- MIL for pH was changed from 6.0 – 9.0 to 6.8 – 8.5 S.U. consistent with the water quality criteria for a class B waterbody.
- Inclusion of compliance schedules requiring the Permittee to (1) achieve compliance with the pH effluent limitations in Section 5 of the proposed permit, and (2) develop, submit for approval, and implement Per-and Polyfluoroalkyl Substances (PFAS) monitoring because the Permittee's industrial sector has the potential to utilize PFAS in manufacturing operations.

3.0 Recommendation

No petitions for hearing were received during the thirty-day comment period. The proposed final permit includes no revisions from the draft permit on which the tentative decision was made. WPED recommends issuance of the NPDES Permit No. CT0021873.