NPDES PERMIT

issued to

Nucor Steel Connecticut, Inc.
35 Toelles Road
Wallingford, CT 06492

Location Address:

35 Toelles Road
Wallingford, CT 06492

Facility ID: 148-140

Permit ID: CT0026794

Receiving Stream: Quinnipiac River

Permit Expires: December 29, 2014

SECTION 1: GENERAL PROVISIONS

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

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

Section 22a-430-3 General Conditions

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

Section 22a-430-4 Procedures and Criteria

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

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

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

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

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

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

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

SECTION 2: DEFINITIONS

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

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

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

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

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

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

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

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

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

“Kg/d” as a mass unit, means kilograms per day.

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

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

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

"No Observable Acute Effect Level (NOAEL)" means any concentration equal to or less than the critical test concentration in a single concentration (pass/fail) toxicity test conducted pursuant to section 22a-430-3(j)(7)(A)(i) RCSA demonstrating greater than 50% survival of test organisms in 100% (undiluted) effluent and 90% or greater survival of test organisms at the CTC.

"Quarterly", in the context of a sampling frequency, means sampling is required in the months of February, May, August, and November. If there is no discharge during the sampling month the Permittee shall sample during the month within the quarter when discharge is available and submit the result in the DMR.

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

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

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

"ug/l" means micrograms per liter.

SECTION 3: COMMISSIONER'S DECISION

(A) The Commissioner, has issued a final determination and found that modification of the existing system or installation of a new system will protect the waters of the state from pollution. The Commissioner's decision is based on **Application No. 200901690** for permit reissuance received on May 20, 2009 and the administrative record established in the processing of that application.

(B) The Commissioner hereby authorizes the Permittee to discharge in accordance with the provisions of this permit, the above referenced application, and all approvals issued by the Commissioner or the Commissioner's authorized agent for the discharges and/or activities authorized by, or associated with, this permit.

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

SECTION 4: GENERAL EFFLUENT LIMITATIONS

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

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

(C) The temperature of any discharge shall not increase the temperature of the receiving stream above 85^{o}F, or, in any case, raise the normal temperature of the receiving stream more than 4^{o}F.

SECTION 5: SPECIFIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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

Table A

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

Wastewater Description: Treated contact cooling water blowdown from steel manufacturing mixed with stormwater including parts cleaning and Quality Assurance (QA) grinding wastewaters

Monitoring Location Description: At the sampling tap after the flow meter

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test [3]
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency [2]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/ Reporting Frequency [2]	Sample Type or measurement to be reported	
Aluminum, Total	mg/l	2.0	4.0	Monthly	Daily Composite	6.0	NR	NA	*
Aquatic Toxicity: Daphnia pulex & Pimephales promelas	%	NA	LC50>36%	Quarterly*	Daily Composite	LC50>12%	NR	NA	
Biological Oxygen Demand (BOD) 5-day	mg/l	NA	15.0	Quarterly*	Daily Composite	NA	NR	NA	
Bis(2-Ethylhexyl) Phthalate	mg/l	NA	-----	Quarterly*	Daily Composite	NA	NR	NA	
Conductivity	uhm/cm	NA	NA	NR	NA	NA	Monthly	Grab	
Cadmium, Total	mg/l	0.021	0.042	Quarterly*	Daily Composite	0.063	NR	NA	*
Cadmium	kg/d	0.0032	0.0064	Quarterly*	Daily Composite	NA	NR	NA	
Chromium, Total	mg/l	1.0	2.0	Quarterly*	Daily Composite	3.0	NR	NA	*
Copper, Total	mg/l	0.245	0.493	Monthly	Daily Composite	0.735	NR	NA	*
Copper,	kg/d	0.037	0.075	Monthly	Daily Composite	NA	NR	NA	
Chlorine, Total Residual	mg/l	NA	NA	NR	NA	----	Monthly	NA	*
Flow, Average [1]	gpd	40,000	NA	Daily/Monthly	Daily Flow	NA	NR	NA	
Flow, Maximum [1]	gpd	NA	72,000	Daily/Monthly	Daily Flow	NA	NR	NA	
Flow, Day of Sampling	gpd	-------	72,000	Monthly	Daily Flow	NA	NR	NA	
Iron, Total	mg/l	3.0	5.0	Quarterly*	Daily Composite	7.5	NR	NA	
Lead, Total	mg/l	0.059	0.12	Monthly	Daily Composite	0.179	NR	NA	*
Lead	kg/d	0.0089	0.018	Monthly	Daily Composite	NA	NR	NA	
Nickel, Total	mg/l	1.0	2.0	Monthly	Daily Composite	3.0	NR	NA	*
Oil & Grease, Total	mg/l	10.0	NA	Monthly	Grab Sample Average	15.0	NR	NA	
Oil & Grease	kg/d	NA	6.3	Monthly	Grab Sample Average	NA	NR	NA	

pH	S.U.	NA	NA	NR	NA	6.0 – 9.0	Monthly	RDS	
pH, Continuous	S.U.	NA	NA	NR	NA	6.0 – 9.0	Monthly	RDM	
Total Suspended Solids	mg/l	20.0	30.0	Monthly	Daily Composite	NA	NR	NA	
Total Suspended Solids	kg/d	9.4	25.2	Monthly	Daily Composite	NA	NR	NA	
Zinc, Total	mg/l	0.680	1.365	Monthly	Daily Composite	2.045	NR	NA	*
Zinc	kg/d	0.103	0.207	Monthly	Daily Composite	NA	NR	NA	

Table Footnotes and Remarks:

Footnotes:

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

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

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

Remarks:

*See the definition for quarterly monitoring frequency in Section 2 above.

TABLE B						
Discharge Serial Number (DSN):001-1			Monitoring Location: T			
Wastewater Description: Treated contact cooling water blowdown from steel manufacturing mixed with stormwater including parts cleaning and Quality Assurance (QA) grinding wastewaters						
Monitoring Location Description: At the sampling tap after the flow meter						
Allocated Zone of Influence (ZOI): 100,000 gph				In stream Waste Concentration (IWC): 1.8		
PARAMETER	**Units**	**Maximum Daily Limit**	**Maximum Instantaneous Limit**	**Sampling Frequency**	**Sample Type**	**Minimum Level Analysis See Section 6**
Aquatic Toxicity, Daphnia, Pulex [1]	%	LC50>36%	NA	Quarterly*	Daily Composite	
Aquatic Toxicity, Pimephales promelas [1]	%	LC50>36%	NA	Quarterly*	Daily Composite	
Aluminum, Total	mg/l	-------	NA	Quarterly*	Daily Composite	*
Bis(2-Ethylhexyl) Phthalate	mg/l	-----	NA	Quarterly	Daily Composite	
Biological Oxygen Demand (BOD) 5-Day	mg/l	-------		Quarterly*	Daily Composite	*
Cadmium, Total	mg/l	------	NA	Quarterly*	Daily Composite	*
Conductivity	uhm/cm	-------	NA	Quarterly*	Daily Composite	
Chromium, Total	mg/l	------	NA	Quarterly*	Daily Composite	*
Copper, Total	mg/l	-----	NA	Quarterly*	Daily Composite	*
Chlorine, Total Residual	mg/l	-------	NA	Quarterly*	Daily Composite	*

TABLE B						
Discharge Serial Number (DSN):001-1			Monitoring Location: T			
Wastewater Description: Treated contact cooling water blowdown from steel manufacturing mixed with stormwater including parts cleaning and Quality Assurance (QA) grinding wastewaters						
Monitoring Location Description: At the sampling tap after the flow meter						
Allocated Zone of Influence (ZOI): 100,000 gph				In stream Waste Concentration (IWC): 1.8		
PARAMETER	**Units**	**Maximum Daily Limit**	**Maximum Instantaneous Limit**	**Sampling Frequency**	**Sample Type**	**Minimum Level Analysis See Section 6**
Iron, Total	mg/l	------	NA	Quarterly*	Daily Composite	
Lead, Total	mg/l	-------	NA	Quarterly*	Daily Composite	*
Nickel, Total	mg/l	------	NA	Quarterly*	Daily Composite	*
Total Suspended Solids	mg/l	------	NA	Quarterly*	Daily Composite	*
Zinc, Total	mg/l	---------	NA	Quarterly*	Daily Composite	*
Remarks: Note: All analysis shall be on the same sample. [1] The results of the Toxicity Tests shall be recorded in % on the DMR. *See the definition for quarterly monitoring frequency in Section 2 above.						

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

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

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

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

SECTION 6: SAMPLE COLLECTION, HANDLING AND ANALYTICAL TECHNIQUES

(A) Chemical Analysis

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

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

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

Parameter	Minimum Level
Aluminum	10.0 ug/L
Cadmium	0.5 ug/L
Chromium	5.0 ug/L
Chlorine, total residual	20.0 ug/L
Copper	5.0 ug/L
Lead	5.0 ug/L
Nickel	5.0 ug/L
Zinc	10.0 ug/L

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

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

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

(B) Acute Aquatic Toxicity Test

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

(a) Composite samples shall be chilled as they are collected. Grab samples shall be chilled immediately following collection. Samples shall be held at 0 - 6 degrees Centigrade until Aquatic Toxicity testing is initiated.

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

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

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

(d) Tests for Aquatic Toxicity shall be initiated within 24 hours of sample collection.

(2) Monitoring for Aquatic Toxicity to determine compliance with the permit limit on Aquatic Toxicity (invertebrate) above shall be conducted for 48-hours utilizing neonatal Daphnia pulex (less than 24-hours old)

(3) Monitoring for Aquatic Toxicity to determine compliance with the permit limit on Aquatic Toxicity (vertebrate) above shall be conducted for 48-hours utilizing larval Pimephales promelas (1-14 days old with no more than 24-hours range in age).

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

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

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

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

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

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

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

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

(e) Synthetic freshwater prepared with deionized water adjusted to a hardness of 50 mg/L (plus or minus 5 mg/L) as CaCO3 shall be used as dilution water in tests with freshwater organisms.

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

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

SECTION 7: REPORTING REQUIREMENTS

(A) The results of chemical analyses and any aquatic toxicity test required above shall be entered on the Discharge Monitoring Report (DMR), provided by this office, and reported to the Bureau of Materials Management and Compliance Assurance (Attn: DMR Processing) at the following address. The report shall also include a detailed explanation of any violations of the limitations specified. The DMR shall be received at this address by the last day of the month following the month in which samples are collected.

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

(B) Complete and accurate aquatic toxicity test data, including percent survival of test organisms in each replicate test chamber, LC50 values and 95% confidence intervals for definitive test protocols, and all supporting chemical/physical measurements performed in association with any aquatic toxicity test, including measured daily flow and hours of operation for the 30 consecutive operating days prior to sample collection if compliance with a limit on Aquatic Toxicity is based on toxicity limits based on actual flows described in Section 7, shall be entered on the Aquatic Toxicity Monitoring Report form (ATMR) and sent to the Bureau of Water Protection and Land Reuse at the following address. The ATMR shall be received at this address by the last day of the month following the month in which samples are collected.

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

(C) If this permit requires monitoring of a discharge on a calendar basis (e.g. Monthly, quarterly, etc.), but a discharge has not occurred within the frequency of sampling specified in the permit, the Permittee must submit the DMR and ATMR, as scheduled, indicating "NO DISCHARGE". For those Permittees whose required monitoring is discharge dependent (e.g. per batch), the minimum reporting frequency is monthly. Therefore, if there is no discharge during a calendar month for a batch discharge, a DMR must be submitted indicating such by the end of the following month.

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

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

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

(C) The Permittee shall notify the Bureau of Materials Management and Compliance Assurance, Water Permitting

and Enforcement Division, within 72 hours and in writing within thirty days of the discharge of any substance listed in the application but not listed in the permit if the concentration or quantity of that substance exceeds two times the level listed in the application.

This permit is hereby issued on 12/30/2009

/S/AMEY W. MARRELLA
COMMISSIONER

AWM/cn

DATA TRACKING AND TECHNICAL FACT SHEET

Permittee: Nucor Steel Connecticut, Inc.

PERMIT, ADDRESS, AND FACILITY DATA

PERMIT #: CT0026794 APPLICATION #: 200901690 FACILITY ID. 148-140

Mailing Address:						**Location Address:**					
Street:	35 Toelles Road					**Street:**	35 Toelles Road				
City:	Wallingford	**ST:**	**CT**	**Zip:**	06492	**City:**	Wallingford	**ST:**	**CT**	**Zip:**	06492
Contact Name:	Elizabeth Honcharik					**DMR Contact**	Elizabeth Honcharik				
Phone No.:	(203) 265-0615 Ext. 347					**Phone No.:**	203) 265-0615 Ext. 347				

PERMIT INFORMATION

DURATION 5 YEAR x 10 YEAR ___ 30 YEAR ____

TYPE New _ Reissuance x Modification ____

CATEGORIZATION POINT (x) NON-POINT ( ) GIS # __

NPDES (x) PRETREAT () GROUND WATER(UIC) ( ) GROUND WATER (OTHER) ( )

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

PRETREAT SIGNIFICANT INDUS USER (SIU) _____
PRETREAT CATEGORICAL (CIU) _____

POLLUTION PREVENTION MANDATE _ ENVIRONMENTAL EQUITY ISSUE ____

COMPLIANCE ISSUES

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

POLLUTION PREVENTION ___ TREATMENT REQUIREMENT____WATER CONSERVATION

WATER QUALITY REQUIREMENT __ REMEDIATION __ OTHER _____

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

OWNERSHIP CODE

Private _x_ Federal __ State __ Municipal (town only) __ Other public ____

DEP STAFF ENGINEER Charles Nezianya

PERMIT FEES

Discharge Code	DSN	Annual Fee
101031z	001	$8,175.00 + $250 = $8,425.00

FOR NPDES DISCHARGES

Drainage basin Code: 5200 Present/Future Water Quality Standard: C/B

NATURE OF BUSINESS GENERATING DISCHARGE

Treated contact cooling water blowdown from steel manufacturing mixed with stormwater

PROCESS AND TREATMENT DESCRIPTION (by DSN)

DSN 001 – Equalization, Flocculation, Neutralization, Filtration and Clarification

RESOURCES USED TO DRAFT PERMIT

_x_ Federal Effluent Limitation Guideline 40 CFR 420 Subpart G
Iron and Steel Manufacturing

__ Performance Standards

__ Federal Development Document
name of category

__ Treatability Manual

_x_ Department File Information

_x_ Connecticut Water Quality Standards

__ Anti-degradation Policy

__ Coastal Management Consistency Review Form

_x_ Other - Explain

BASIS FOR LIMITATIONS, STANDARDS OR CONDITIONS

x Best Available Technology (BAT) – pH

x Best Professional Judgment (See Other Comments) Aluminum, Chromium, Iron, Nickel, BOD & TSS

x Case-by-Case Determination (See Other Comments) Aluminum, Chromium, Iron, Nickel, BOD & TSS

x Section 22a-430-4(s) of the Regulations of Connecticut State Agencies - Aluminum, Chromium, Iron, Nickel & TSS

x In order to meet in-stream water quality (See General Comments) – Cadmium, Copper, Lead & Zinc

GENERAL COMMENTS

Water quality based discharge limitations were included in this permit for consistency with Connecticut Water Quality Standards and criteria, pursuant to 40 CFR 122.44(d). Each parameter was evaluated for consistency with the available aquatic life criteria (acute and chronic) and human health (fish consumption only) criteria, considering the zone of influence allocated to the facility where appropriate. The statistical procedures outlined in the EPA Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001) were employed to calculate the limits. The most restrictive of the water quality limitations, aquatic life acute, aquatic life chronic, and human health, was compared with limitations developed according to State and Federal Best Available Technology (BAT). Where the water quality based limitations were more restrictive than BAT, the water quality based limitation was included in the permit as a mass limit in addition to the BAT concentration limit.

OTHER COMMENTS

Nucor Steel Connecticut, Inc. is a steel rolling mill manufacturing steel rod and rebar, and steel mesh. Nucor submitted a timely and sufficient application on May 20, 2009 to renew its NPDES permit issued on November 15, 2004.

Nucor has a water treatment which operates as a closed loop system whereby the treated effluent is reused in their process with no discharge. Nucor may discharge only if the water conductivity is high and/or the level of treated wastewater in the holding is high due to stormwater accumulation in the tank. Nucor only discharges on an as needed basis.

Nucor uses Chemtreat, Inc. water treatment (Pep, SMF2-FG Series Media Filter) system consisting of the following: scale pit, longitudinal scraper, decanting, pressure filtration, cooling towers and evacuation and treatment of sludge and floating oils. The approved treatment system is necessary to allow Nucor to recycle their wastewater and also to meet their wastewater permit effluent limits. This is consistent with the tentative determination notice issued on 11/17/09 and Section 3(A) of this permit.

Nucor is subject to 40 CFR 420 Subpart G (Iron and Steel manufacturing, hot forming category). The effluent limitations under these EPA's regulations are based on production kg/kkg or Ibs/1,000 Ibs of product for TSS and oil and grease. pH is also regulated under this regulation with the allowable range of 6.0 to 9.0 S.U. Water quality based numeric limits are being proposed for these parameters in this draft permit consistent with the limits in the existing permit. The water quality based effluent limits are more stringent than the EPA's production based limits.

The effluent limitations proposed in this draft permit are consistent with the limits in the permit issued on November 15, 2004, except that the water quality based effluent limits for cadmium, copper, lead and zinc were revised consistent with the Interoffice Memorandum dated September, 17, 2009 from the Bureau of Water Protection and Land Reuse.

Although quarterly monitoring is proposed for certain pollutants consistent with the existing permit, the quarterly definition requires Nucor to sample during the next discharge event if discharge does not exist in the specified month.

Nucor indicated in a letter dated October 30, 2009 that they have accepted the draft permit and will comply with the permit terms and conditions with the addition of parts cleaning and Quality Assurance (QA) grinding wastewaters to the treatment system and discharge to the Quinnipiac River.