National Pollutant Discharge Elimination System (NPDES) Permit Program

PUBLIC NOTICE

NPDES Permit to Discharge to State Waters

Ohio Environmental Protection Agency
Permits Section
50 West Town St., Suite 700
P. O. Box 1049
Columbus, Ohio 43216-1049
(614) 644-2001

Public Notice No.:	216336
Date of Issue of Public Notice:	11/25/2025
Name and Address of Applicant:	Clean Energy Future - Trumbull LLC, 7733 Todd Avenue NW, Lordstown, OH, 44481
Name and Address of Facility Where Discharge Occurs:	Trumbull Energy Center, 7733 Todd Avenue NW, Lordstown, OH, 44481, Trumbull County
Outfall Flow and Location List:	001 620000 GPD Lat: 41.145417 Long: -80.851889
Receiving Stream:	Mud Creek at River Mile 7.0
Nature of Business:	The proposed Trumbull Energy Center (TEC) will provide 940 MW of electrical capacity to residents of the region. The facility will be combined cycle gas turbine plant, utilizing clean burning natural gas technology and state of the art emissions control technologies. The electrical capacity of the plant will replace existing capacity that is expected to be lost as coal and gas fired plants in the region are retired. Plant design calls for continuous discharges of non-contact cooling water from the plant's cooling water towers, with average discharges of 0.62 mgd and maximum discharges of 1.1 mgd. Stormwater and cooling water discharges will be sequestered in a combined detention/cooling pond prior to discharge. Discharges will be piped to a single outfall (001) on Mud Creek.
Key parameters to be limited in the permit are as follows:	Nitrogen, Ammonia (NH3), Chlorine, Total Residual , Acute Toxicity, Ceriodaphnia dubia, Acute Toxicity, Pimephales promelas, Residue, Total Filterable, Water Temperature, Oil and Grease, Hexane Extr Method, pH Range Excursion, Maximum Duration, pH Range Excursions, Monthly Total Duration

The Director has, after evaluation of pertinent technical, social, and economic information, determined that the discharge specified in this permit will result in a change from ambient in water quality of the receiving stream. This change will not interfere with or become injurious to the existing designated use.

On the basis of preliminary staff review and application of standards and regulations, the director of the Ohio Environmental Protection Agency will issue a permit for the discharge subject to certain effluent conditions and special conditions. The draft permit will be issued as a final action unless the director revises

the draft after consideration of the record of a public meeting or written comments, or upon disapproval by the administrator of the U.S. Environmental Protection Agency. Any person may submit written comments on the draft permit and administrative record and may request a public hearing. A request for public hearing shall be in writing and shall state the nature of the issues to be raised. In appropriate cases, including cases where there is significant public interest, the director may hold a public hearing on a draft permit or permits prior to final issuance of the permit or permits. Following final action by the director, any aggrieved party has the right to appeal to the Environmental Review Appeals Commission.

Interested persons are invited to submit written comments upon the discharge permit. Comments should be submitted in person, by E-mail or by mail no later than 30 days after the date of this public notice. Comments should be e-mailed to epa.dswcomments@epa.ohio.gov or delivered or mailed to both of the following locations: 1) Ohio Environmental Protection Agency, Lazarus Government Center, Division of Surface Water, Permits Processing Unit, 50 West Town St., Suite 700, P.O. Box 1049, Columbus, Ohio 43216-1049 and 2) Ohio Environmental Protection Agency, Northeast District Office 2110 East Aurora Road, Twinsburg, Ohio 44087.

The Ohio EPA permit number and public notice numbers should appear next to the above address on the envelope and on each page of any submitted comments. All comments received no later than 30 days after the date of this public notice will be considered.

Proposed Water Quality Based Effluent Limitations: This draft permit contains water quality based effluent limitation(s) (WQBELs). In accordance with Ohio Revised Code Section 6111.03(J)(3), the Director establishes WQBELs after considering, to the extent consistent with the Federal Water Pollution Control Act, evidence relating to the technical feasibility and economic reasonableness of removing the polluting properties from those wastes and to evidence relating to conditions calculated to result from that action and their relation to benefits to the people of the state and to accomplishment of the purposes of this chapter. This determination was made based on data and information available at the time the permit was drafted, which included the contents of the of the timely submitted National Pollutant Discharge Elimination System (NDPES) permit renewal application, along with any and all pertinent information available to the Director.

This public notice hereby allows the permittee to provide to the Director for consideration during this public comment period, additional site-specific pertinent and factual information with respect to the technical feasibility and economic reasonableness for achieving compliance with WQBEL(s). This information shall be submitted to the addresses listed above.

Should the applicant need additional time to review, obtain or develop site-specific pertinent and factual information with respect to the technical feasibility and economic reasonableness of achieving compliance with WQBEL(s), written notification for any additional time shall be sent no later than 30 days after the date of this public notice to the Director at the addresses listed above.

Should the applicant determine that compliance with a WQBEL is technically and/or economically unattainable, the permittee may submit an application for a variance to the applicable WQBEL in accordance with the terms and conditions set forth in Ohio Administrative Code (OAC) Rule 3745-1-38 no later than 30 days after the date of this public notice to the addresses listed above.

Alternately, the applicant may propose the development of site-specific water quality standard(s) pursuant to OAC Rule 3745-1-39. The permittee shall submit written notification to the Director regarding their intent to develop site-specific water quality standards for the pollutant at issue to the addresses listed above no later than 30 days after the date of this public notice.

The application, fact sheets, permit including effluent limitations, special conditions, comments received, and other documents are available for inspection and may be copied at a cost of 5 cents per page at the Ohio Environmental Protection Agency at the address shown on page one of this public notice any time between the hours of 8 a.m. and 4:30 p.m., Monday through Friday. Copies of the public notice are available at no charge at the same address. Individual NPDES draft permits that are in public notice are available on

DSW's web site: https://epa.ohio.gov/divisions-and-offices/surface-water/permitting/list-of-draft-permit-public-notices

Mailing lists are maintained for persons or groups who desire to receive public notice for all applications in the state or for certain geographical areas. Persons or groups may also request copies of fact sheets, applications, or other documents pertaining to specific applications. Persons or groups may have their names put on such a list by making a written request to the agency at the address shown above.

Ohio EPA Permit No.: 3IN00398*BD
Application No: OH0148474

DRAFT COPY
SUBJECT TO REVISION
OHIO EPA

Action Date:
Effective Date:
Expiration Date: 5 Years

Ohio Environmental Protection Agency
Authorization to Discharge Under the
National Pollutant Discharge Elimination System

In compliance with the provisions of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et. seq., hereinafter referred to as the "Act"), and the Ohio Water Pollution Control Act (Ohio Revised Code Section 6111),

Clean Energy Future - Trumbull LLC

is authorized by the Ohio Environmental Protection Agency, hereinafter referred to as "Ohio EPA," to discharge from the Trumbull Energy Center facility, located at 7733 Tod Avenue SW, Lordstown, Ohio, Trumbull County, to Mud Creek at River Mile 7.0 in accordance with the conditions specified in Parts I, II, and III of this permit.

This permit is conditioned upon payment of applicable fees as required by Section 3745.11 of the Ohio Revised Code.

This permit and the authorization to discharge shall expire at midnight on the expiration date shown above. In order to receive authorization to discharge beyond the above date of expiration, the permittee shall submit such information and forms as required by the Ohio EPA no later than 180 days prior to the above date of expiration.

_____
John Logue
Director

Total Pages: 22

PART I, A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from Outfall 3IN00398001. See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

Table - Final Outfall - 001 – Final

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
Parameter	Concentration Specified Units				Loading* kg/day			Measuring Frequency	Sampling Type	Monitoring Months
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
00011 - Water Temperature - F	65	-	-	60	-	-	-	1/Day	Maximum Indicating Thermometer	November
00011 - Water Temperature - F	57	-	-	52	-	-	-	1/Day	Maximum Indicating Thermometer	March
00011 - Water Temperature - F	74	-	-	68	-	-	-	1/Day	Maximum Indicating Thermometer	May
00011 - Water Temperature - F	82	-	-	78	-	-	-	1/Day	Maximum Indicating Thermometer	June
00011 - Water Temperature - F	52	-	-	47	-	-	-	1/Day	Maximum Indicating Thermometer	December
00011 - Water Temperature - F	85	-	-	82	-	-	-	1/Day	Maximum Indicating Thermometer	July
00011 - Water Temperature - F	67	-	-	62	-	-	-	1/Day	Maximum Indicating Thermometer	April
00011 - Water Temperature - F	73	-	-	68	-	-	-	1/Day	Maximum Indicating Thermometer	October
00011 - Water Temperature - F	52	-	-	47	-	-	-	1/Day	Maximum Indicating Thermometer	January
00011 - Water Temperature - F	85	-	-	82	-	-	-	1/Day	Maximum Indicating Thermometer	August
00011 - Water Temperature - F	52	-	-	47	-	-	-	1/Day	Maximum Indicating Thermometer	February
00011 - Water Temperature - F	81	-	-	77	-	-	-	1/Day	Maximum Indicating Thermometer	September
00400 - pH - S.U.	9.0	6.5	-	-	-	-	-	1/Day	Continuous	All
Oil and Grease, Hexane Extr Method - mg/l	10	-	-	-	-	-	-	1 / 2 Weeks	Grab	All
00610 - Nitrogen, Ammonia (NH3) - mg/l	10.7	-	-	1.6	25.1	-	3.8	2/Week	24hr Composite	Summer
00610 - Nitrogen, Ammonia (NH3) - mg/l	11.4	-	-	6.1	26.8	-	14.3	2/Week	24hr Composite	Winter
00665 - Phosphorus, Total (P) - mg/l	-	-	-	-	-	-	-	1 / 2 Weeks	24hr Composite	All
01094 - Zinc, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Month	24hr Composite	All

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
Parameter	Concentration Specified Units				Loading* kg/day			Measuring Frequency	Sampling Type	Monitoring Months
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
01118 - Chromium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Month	24hr Composite	All
01119 - Copper, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Month	24hr Composite	All
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Day	Continuous	All
50060 - Chlorine, Total Residual - mg/l	0.019	-	-	-	-	-	-	1/Day	Grab	All
50092 - Mercury, Total (Low Level) - ng/l	-	-	-	-	-	-	-	1/Month	Grab	All
51600 - pH Range Excursion, Maximum Duration - Minutes	60	-	-	-	-	-	-	When Disch.	Total	All
61425 - Acute Toxicity, Ceriodaphnia dubia - TUa	1.0	-	-	-	-	-	-	1/Year	24hr Composite	Yearly
61427 - Acute Toxicity, Pimephales promelas - TUa	1.0	-	-	-	-	-	-	1/Year	24hr Composite	Yearly
61941 - pH, Maximum - S.U.	-	-	-	-	-	-	-	1/Day	Continuous	All
61942 - pH, Minimum - S.U.	-	-	-	-	-	-	-	1/Day	Continuous	All
70300 - Residue, Total Filterable - mg/l	-	-	-	1533	-	-	3597	1 / 2 Weeks	24hr Composite	All
82581 - pH Range Excursions, >60 Minutes - Number/Day	0	-	-	-	-	-	-	When Disch.	Total	All
82582 - pH Range Excursions, Monthly Total Duration - Minutes	446	-	-	-	-	-	-	1/Month	Total	All

Notes for Station Number 3IN00398001:

* Effluent loadings based on flow of 0.62 MGD.

a. This outfall is a combination of treated process wastewater (cooling tower blowdown, low-volume wastewater) and industrial stormwater. The cooling water blowdown and low-volume wastewater are subject to New Source Performance Standards (NSPS) Effluent Limitation Guidelines (ELGs) in 40 CFR 423.15.

b. Sampling shall be performed when discharging. If this station is monitored during a particular month and there are no discharges during the entire month, select the "No Discharge" check box on the data entry form and PIN the eDMR.

c. Total Residual Chlorine - The limit is the maximum allowed at any time at the outfall and is based on the use of dechlorination chemicals. The limit is more restrictive than the New Source Performance Standards (NSPS) in 40 CFR 423.15 (b)(10); the 2-hour discharge restriction in the NSPS is not required. The maximum concentration value recorded shall be reported. See Part II, Item J.

d. Mercury - See Part II, Item, L.

e. Acute Toxicity - See Part II, Item N.

f. Chromium, Zinc, and other priority pollutants in cooling tower maintenance chemicals - See Part II, Item H.

g. Cooling Tower or Other Treatment Additives - See Part II, Item G.

h. PCBs - See Part II, Item K.

i. Temperature - The maximum (highest) temperature value recorded shall be reported.

j. The pH (Maximum/Minimum) shall be maintained within the range, 6.5 - 9.0 S.U. pH readings which do not fall within this range shall be considered an excursion of permit limits. See Part II, Item I.

k. pH Range Excursions, Monthly Total Duration (in minutes), pH Range Excursions, Maximum Duration (in minutes), and pH Range Excursions, > 60 Minutes (Number/Day) - See Part II, Item I.

PART I, A. INTERNAL LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from internal monitoring station 3IN00398601. See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

Table - Internal Monitoring Station - 601 – Final

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
Parameter	Concentration Specified Units				Loading* kg/day			Measuring Frequency	Sampling Type	Monitoring Months
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
00400 - pH - S.U.	9.0	6.0	-	-	-	-	-	1/Day	Grab	All
00530 - Total Suspended Solids - mg/l	100	-	-	30	-	-	-	2/Week	Composite	All
00552 - Oil and Grease, Hexane Extr Method - mg/l	20	-	-	15	-	-	-	1/Month	Grab	All
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Day	Continuous	All

Notes for Station Number 3IN00398601:

a. The discharge at this station shall be representative of treated low volume wastewater (LVW) from the oil-water separator (prior to the Cooling Pond). LVW is subject to the New Source Performance Standards (NSPS) Effluent Limitation Guidelines (ELGs) in 40 CFR 423.15.

b. Sampling shall be performed when discharging. If this station is monitored during a particular month and there are no discharges during the entire month, select the "No Discharge" check box on the data entry form and PIN the eDMR.

PART I, C. - SCHEDULE OF COMPLIANCE

Reports and notifications required under items in Part I, C. of this permit shall be submitted electronically using the STREAMS, which is available through the eBusiness center.

Milestone Summary Report			
Section	**Report**	**Event Code**	**Due Date**
Wastewater Characterization	Complete Waste Characterization	97099	13 months after the permit effective date

1. Outfall 3IN00398001 Wastewater Characterization Schedule

The permittee shall evaluate the process wastewater discharge from the facility as expeditiously as practicable, but not later than the dates developed in accordance with the following schedule:

a. Notify Ohio EPA Northeast District Office within seven days of commencement of discharge through Outfall 3IN00398001.

b. The permittee shall submit quantitative effluent discharge data for all parameters required by NPDES Application Form 2C as soon as practicable, but not later than 13 months after the permit effective date. (Event Code 97099).

PART II - OTHER REQUIREMENTS

A. Description of the location of the required sampling stations are as follows:

Sampling Station	Description of Location
3IN00398001	Final effluent from Cooling Pond to Mud Creek (Lat: 41.1454 N, -80.8519W)
3IN00398601	Internal Monitoring Station: Representative of all low volume wastewater at effluent of oil-water separator prior to discharge to Cooling Pond

B. This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved.

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

C. Water quality-based permit limitations in this permit may be revised based on updated wasteload allocations or use designation rules. This permit may be modified, or revoked and reissued, to include new water quality-based effluent limits or other conditions that are necessary to comply with a revised wasteload allocation, or an approved total maximum daily loads (TMDL) report as required under Section 303 (d) of the Clean Water Act.

D. All parameters, except flow and any other continuously recorded parameters, need not be monitored on days when the plant is not normally staffed (Saturdays, Sundays, and Holidays). On those days, report "AN" on the monthly report form.

E. Composite samples shall be comprised of a series of grab samples collected over a 24-hour period and proportionate in volume to the wastewater flow rate at the time of sampling. Such samples shall be collected at such times and locations, and in such a fashion, as to be representative of the facility's overall performance.

F. Grab samples shall be collected at such times and locations, and in such fashion, as to be representative of the facility's performance.

G. Treatment Additives

Written permission must be obtained from the director of the Ohio EPA prior to the use of any treatment additives discharged to waters of the state, except for those exempt in rule. If additives are being used that have not previously been approved, an approval must be obtained for continued use. Discharges of these additives must meet Ohio Water Quality Standards and shall not be harmful or inimical to aquatic life. Request for approvals shall be filed in accordance with OAC 3745-33-03(G) and should be filed at least forty-five days prior to use or immediately if the additive is currently being used. Application forms are available for download on the DSW website: https://epa.ohio.gov/divisions-and-offices/surface-water/permitting/individual-wastewater-discharge-permit-applications-industrial-and-municipal-discharges-

H. There shall be no detectable amount of any priority pollutant attributable to cooling tower maintenance

chemicals in the cooling tower blowdown wastewater.

I. pH Excursion

At sampling stations where pH is monitored continuously, the permittee shall maintain the pH of such wastewater within the range specified in this permit. Any incident in which the pH exceeds the range specified in the permit shall be considered an "excursion". Excursions from the range are permitted subject to the following limitations and conditions:

1. The total duration of excursions (total time above or below the limit) shall not exceed 7 hours and 26 minutes (446 minutes) in a calendar month.

2. No individual excursion from the range of pH values (consecutive time above or below a limit) shall exceed 60 minutes.

The permittee shall report each month for each monitoring station where pH is monitored continuously the following:

a. the number of pH excursions;
b. the duration of each excursion;
c. the date of each excursion; and
d. the total time of all excursions combined.

4. For reporting purposes on eDMR, the permittee shall report as follows:

a. For daily pH values, report both the highest and lowest pH value for that day.

b. For the parameter "pH Range Excursions, Monthly Total Duration (minutes)" report the total duration of excursions for the entire calendar month on Day 1.

c. For the parameter "pH Range Excursion, Maximum Duration (minutes)" report, the duration of the longest excursion on each day of occurrence. If no such excursions occurred during the month, report "0" on Day 1.

d. For the parameter "pH Range Excursions > 60 Minutes (Number/Day)" report the number of excursions each day that exceeded 60 minutes in duration. If no such excursions occurred during the month, report "0" on Day 1.

J. Limits Below Quantification

The parameters below have had effluent limitations established that are below the Ohio EPA Quantification Level (OEPA QL) for the approved analytical procedure promulgated at 40 CFR 136. OEPA QLs may be expressed as Practical Quantification Levels (PQL) or Minimum Levels (ML). Compliance with an effluent limit that is below the OEPA QL is determined in accordance with ORC Section 6111.13 and OAC Rule 3745-33-07(C). For maximum effluent limits, any value reported below the OEPA QL shall be considered in compliance with the effluent limit. For average effluent limits, compliance shall be determined by taking the arithmetic mean of values reported for a specified averaging period, using zero (0) for any value reported at a concentration less than the OEPA QL, and comparing that mean to the appropriate average effluent limit. An arithmetic mean that is less than or equal to the average effluent limit shall be considered in compliance with that limit.

The permittee must utilize the lowest available detection method currently approved under 40 CFR Part 136 for monitoring these parameters.
REPORTING:

All analytical results, even those below the OEPA QL (listed below), shall be reported. Analytical results are to be reported as follows:

1. Results above the QL: Report the analytical result for the parameter of concern.
2. Results above the MDL, but below the QL: Report the analytical result, even though it is below the QL.
3. Results below the MDL: Analytical results below the method detection limit shall be reported as "below detection" using the reporting code "AA".

The following table of quantification levels will be used to determine compliance with NPDES permit limits:

Parameter	PQL	ML
Chlorine, tot. res.	0.050 mg/l	--

This permit may be modified, or, alternatively, revoked and reissued, to include more stringent effluent limits or conditions if information generated as a result of the conditions of this permit indicate the presence of these pollutants in the discharge at levels above the water quality-based effluent limit (WQBEL).

K. There shall be no discharge of polychlorinated biphenyl compounds attributable to the permittee's operations.

L. Monitoring for Mercury (low level)
The permittee shall use EPA Method 1631 or EPA Method 245.7, promulgated under 40 CFR 136, to comply with the mercury monitoring requirements of this permit.
M. Outfall Signage

The permittee shall maintain a permanent marker on the stream bank at each outfall that is regulated under this NPDES permit. This includes final outfalls and bypasses. The sign shall include, at a minimum, the name of the establishment to which the permit was issued, the Ohio EPA permit number, and the outfall number and a contact telephone number. The information shall be printed in letters not less than two inches in height. The sign shall be a minimum of 2 feet by 2 feet and shall be a minimum of 3 feet above ground level. The sign shall not be obstructed such that persons in boats or persons swimming on the river or someone fishing or walking along the shore cannot read the sign. Vegetation shall be periodically removed to keep the sign visible. If the outfall is normally submerged the sign shall indicate that. When an existing sign is replaced or reset, the new sign shall comply with the requirements of this section.

N. Biomonitoring Program Requirements

As soon as possible but not later than three months after commencement of discharge, the permittee shall initiate an effluent biomonitoring program to determine the toxicity of the effluent from Outfall 3IN00398001.

General Requirements

All toxicity testing conducted as required by this permit shall be done in accordance with "Reporting and

Testing Guidance for Biomonitoring Required by the Ohio Environmental Protection Agency" (hereinafter, the "biomonitoring guidance"), Ohio EPA, July 1998 (or current revision). The Standard Operating Procedures (SOP) or verification of SOP submittal, as described in Section 1.B. of the biomonitoring guidance shall be submitted no later than three months after the effective date of this permit. If the laboratory performing the testing has modified its protocols, a new SOP is required.

Testing Requirements

1. Acute Bioassays

The permittee shall conduct definitive acute toxicity tests, as specified in Part I,A, using water fleas (*Ceriodaphnia dubia*) and fathead minnows (*Pimephales promelas*) on effluent samples from Outfall 3IN00398001. These tests shall be conducted as specified in Section 2 of the biomonitoring guidance.

2. Testing of Ambient Water

In conjunction with the acute effluent toxicity tests, upstream control water shall be collected at a point outside the zone of effluent and receiving water interaction. Testing of ambient waters shall be done in accordance with Sections 2 and 3 of the biomonitoring guidance.

3. Data Review

a. Reporting

Following completion of each bioassay requirement, the permittee shall report results of the tests in accordance with Sections 2.H.1. and 2.H.2.a. of the biomonitoring guidance, including reporting the results on the monthly DMR and submitting a copy of the complete test report to Ohio EPA, Division of Surface Water. The test report may be submitted electronically using the acute or chronic NPDES Biomonitoring Report Form in STREAMS, which is accessible through the Ohio EPA eBusiness Center.

Based on Ohio EPA's evaluation of the results, this permit may be modified to require additional biomonitoring, require a toxicity reduction evaluation, and/or contain whole effluent toxicity limits.

b. Definitions

TUa = Acute Toxicity Units = 100/LC50

PART III - GENERAL CONDITIONS

1. DEFINITIONS

"Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

"Average weekly" discharge limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week. Each of the following 7-day periods is defined as a calendar week: Week 1 is Days 1 - 7 of the month; Week 2 is Days 8 - 14; Week 3 is Days 15 - 21; and Week 4 is Days 22 - 28. If the "daily discharge" on days 29, 30 or 31 exceeds the "average weekly" discharge limitation, Ohio EPA may elect to evaluate the last 7 days of the month as Week 4 instead of Days 22 - 28. Compliance with fecal coliform bacteria or *E. coli* bacteria limitations shall be determined using the geometric mean.

"Average monthly" discharge limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. Compliance with fecal coliform bacteria or *E. coli* bacteria limitations shall be determined using the geometric mean.

"85 percent removal" means the arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

"Absolute Limitations" Compliance with limitations having descriptions of "shall not be less than," "nor greater than," "shall not exceed," "minimum," or "maximum" shall be determined from any single value for effluent samples and/or measurements collected.

"Net concentration" shall mean the difference between the concentration of a given substance in a sample taken of the discharge and the concentration of the same substances in a sample taken at the intake which supplies water to the given process. For the purpose of this definition, samples that are taken to determine the net concentration shall always be 24-hour composite samples made up of at least six increments taken at regular intervals throughout the plant day.

"Net Load" shall mean the difference between the load of a given substance as calculated from a sample taken of the discharge and the load of the same substance in a sample taken at the intake which supplies water to given process. For purposes of this definition, samples that are taken to determine the net loading shall always be 24-hour composite samples made up of at least six increments taken at regular intervals throughout the plant day.

"MGD" means million gallons per day.

"mg/l" means milligrams per liter.

"ug/l" means micrograms per liter.

"ng/l" means nanograms per liter.

"S.U." means standard pH unit.

"kg/day" means kilograms per day.

"Reporting Code" is a five-digit number used by the Ohio EPA in processing reported data. The reporting code does not imply the type of analysis used nor the sampling techniques employed.

"Quarterly (1/Quarter) sampling frequency" means the sampling shall be done in the months of March, June, August, and December, unless specifically identified otherwise in the Effluent Limitations and Monitoring Requirements table.

"Yearly (1/Year) sampling frequency" means the sampling shall be done in the month of September, unless specifically identified otherwise in the effluent limitations and monitoring requirements table.

"Semi-annual (2/Year) sampling frequency" means the sampling shall be done during the months of June and December, unless specifically identified otherwise.

"Winter" shall be considered to be the period from November 1 through April 30.

"Bypass" means the intentional diversion of waste streams from any portion of the treatment facility.

"Summer" shall be considered to be the period from May 1 through October 31.

"Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

"Sewage sludge" means a solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works as defined in section 6111.01 of the Revised Code. "Sewage sludge" includes, but is not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment processes. "Sewage sludge" does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator, grit and screenings generated during preliminary treatment of domestic sewage in a treatment works, animal manure, residue generated during treatment of animal manure, or domestic septage.

"Biosolids" means sewage sludge or mixtures containing sewage sludge that have been treated for beneficial use.

"Sewage sludge weight" means the weight of sewage sludge, in dry U.S. tons, including admixtures such as liming materials or bulking agents. Monitoring frequencies for sewage sludge parameters are based on the reported sludge weight generated in a calendar year (use the most recent calendar year data when the NPDES permit is up for renewal).

"Sewage sludge fee weight" means the weight of sewage sludge, in dry U.S. tons, excluding admixtures

such as liming materials or bulking agents. Annual sewage sludge fees, as per section 3745.11(Y) of the Ohio Revised Code, are based on the reported sludge fee weight for the most recent calendar year.

2. RESERVED

3. FACILITY OPERATION AND QUALITY CONTROL

All wastewater treatment works shall be operated in a manner consistent with the following:

A. At all times, the permittee shall maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee necessary to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with conditions of the permit.

B. The permittee shall effectively monitor the operation and efficiency of treatment and control facilities and the quantity and quality of the treated discharge.

C. Maintenance of wastewater treatment works that results in degradation of effluent quality shall be scheduled during non-critical water quality periods and shall be carried out in a manner approved by Ohio EPA as specified in the Paragraph in the PART III entitled, "UNAUTHORIZED DISCHARGES".

4. REPORTING

A. Monitoring data required by this permit shall be submitted monthly on Ohio EPA 4500 Discharge Monitoring Report (DMR) forms using the electronic DMR (e-DMR) internet application. e-DMR allows permitted facilities to enter, sign, and submit DMRs on the internet. e-DMR information is found on the following web page:
https://epa.ohio.gov/divisions-and-offices/surface-water/permitting/electronic-business-services

B. DMRs shall be signed by a facility's Responsible Official or a Delegated Responsible Official (i.e. a person delegated by the Responsible Official). The Responsible Official of a facility is defined as:

1. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (a) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or (b) The manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

3. In the case of a municipal, state, or other public facility, by either the principal executive officer, the ranking elected official or other duly authorized employee.

For e-DMR, the person signing and submitting the DMR will need to obtain an eBusiness Center account and Personal Identification Number (PIN). Additionally, Delegated Responsible Officials must be delegated by the Responsible Official on-line using the eBusiness Center's delegation function. For more information on the PIN and delegation processes, please view the following web page: https://epa.ohio.gov/help-center/ebusiness-center

C. DMRs submitted using e-DMR shall be submitted to Ohio EPA by the 20th day of the month following the month-of-interest.

D. If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified in Section 5. SAMPLING AND ANALYTICAL METHODS, the results of such monitoring shall be included in the calculation and reporting of the values required in the reports specified above.

E. Analyses of pollutants not required by this permit, except as noted in the preceding paragraph, shall not be reported to the Ohio EPA, but records shall be retained as specified in Section 7. RECORDS RETENTION.

5. SAMPLING AND ANALYTICAL METHOD

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored flow. Test procedures for the analysis of pollutants shall conform to regulation 40 CFR 136, "Test Procedures for the Analysis of Pollutants" unless other test procedures have been specified in this permit. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.

6. RECORDING OF RESULTS

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

A. The exact place and date of sampling; (time of sampling not required on EPA 4500)

B. The person(s) who performed the sampling or measurements;

C. The date the analyses were performed on those samples;

D. The person(s) who performed the analyses;

E. The analytical techniques or methods used; and

F. The results of all analyses and measurements.

7. RECORDS RETENTION

The permittee shall retain all of the following records for the wastewater treatment works for a minimum of three years except those records that pertain to the treatment, storage, transfer, or disposal, and the beneficial use of biosolids, which shall be kept for a minimum of five years, including:

A. All sampling and analytical records (including internal sampling data not reported);

B. All original recordings for any continuous monitoring instrumentation;

C. All instrumentation, calibration and maintenance records;

D. All treatment works operation and maintenance records;

E. All reports required by this permit; and

F. Records of all data used to complete the application for this permit for a period of at least three years, or five years for sewage sludge or biosolids, from the date of the sample, measurement, report, or application.

These periods will be extended during the course of any unresolved litigation, or when requested by the Regional Administrator or the Ohio EPA. The three-year period, or five-year period for sewage sludge or biosolids, for retention of records shall start from the date of sample, measurement, report, or application.

8. AVAILABILITY OF REPORTS

Except for data determined by the Ohio EPA to be entitled to confidential status, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the appropriate district offices of the Ohio EPA. Both the Clean Water Act and Section 6111.05 Ohio Revised Code state that effluent data and receiving water quality data shall not be considered confidential.

9. DUTY TO PROVIDE INFORMATION

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking, and reissuing, or terminating the permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

10. RIGHT OF ENTRY

The permittee shall allow the Director or an authorized representative upon presentation of credentials and other documents as may be required by law to:

A. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.

B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit.

C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.

D. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

11. UNAUTHORIZED DISCHARGES

A. Bypass Not Exceeding Limitations - The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient

operation. These bypasses are not subject to the provisions of paragraphs 11.B and 11.C.

B. Notice

1. Anticipated Bypass - If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least ten days before the date of the bypass.

2. Unanticipated Bypass - The permittee shall submit notice of an unanticipated bypass as required in paragraph 12.B (24-hour notice).

C. Prohibition of Bypass

1. Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

c. The permittee submitted notices as required under paragraph 11.B.

2. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 11.C.1.

12. NONCOMPLIANCE NOTIFICATION

A. Exceedance of a Daily Maximum Discharge Limit

1. The permittee shall report noncompliance that is the result of any violation of a daily maximum discharge limit for any of the pollutants listed by the Director in the permit by e-mail or telephone within twenty-four (24) hours of discovery. The permittee may report to the appropriate Ohio EPA district office e-mail account as follows (this method is preferred):

Southeast District Office: sedo24hournpdes@epa.ohio.gov
Southwest District Office: swdo24hournpdes@epa.ohio.gov
Northwest District Office: nwdo24hournpdes@epa.ohio.gov
Northeast District Office: nedo24hournpdes@epa.ohio.gov
Central District Office: cdo24hournpdes@epa.ohio.gov
Central Office: co24hournpdes@epa.ohio.gov

The permittee shall attach a noncompliance report to the email. A noncompliance report form is available on the following website under the Monitoring and Reporting - Non-Compliance Notification section: https://epa.ohio.gov/divisions-and-offices/surface-water/permitting/individual-wastewater-discharge-permits

Or, the permittee may report to the appropriate Ohio EPA district office by telephone toll-free between 8:00 AM and 5:00 PM as follows:

Southeast District Office: (800) 686-7330
Southwest District Office: (800) 686-8930
Northwest District Office: (800) 686-6930
Northeast District Office: (800) 686-6330
Central District Office: (800) 686-2330
Central Office: (614) 644-2001

The permittee shall include the following information in the telephone noncompliance report:

a. The name of the permittee, and a contact name and telephone number;
b. The limit(s) that has been exceeded;
c. The extent of the exceedance(s);
d. The cause of the exceedance(s);
e. The period of the exceedance(s) including exact dates and times;
f. If uncorrected, the anticipated time the exceedance(s) is expected to continue; and
g. Steps taken to reduce, eliminate or prevent occurrence of the exceedance(s).

B. Other Permit Violations

1. The permittee shall report noncompliance that is the result of any unanticipated bypass resulting in an exceedance of any effluent limit in the permit or any upset resulting in an exceedance of any effluent limit in the permit by e-mail or telephone within twenty-four (24) hours of discovery. The permittee may report to the appropriate Ohio EPA district office e-mail account as follows (this method is preferred):

Southeast District Office: sedo24hournpdes@epa.ohio.gov
Southwest District Office: swdo24hournpdes@epa.ohio.gov
Northwest District Office: nwdo24hournpdes@epa.ohio.gov
Northeast District Office: nedo24hournpdes@epa.ohio.gov
Central District Office: cdo24hournpdes@epa.ohio.gov
Central Office: co24hournpdes@epa.ohio.gov

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Northeast District Office: (800) 686-6330
Central District Office: (800) 686-2330
Central Office: (614) 644-2001

The permittee shall include the following information in the telephone noncompliance report:

a. The name of the permittee, and a contact name and telephone number;
b. The time(s) at which the discharge occurred, and was discovered;
c. The approximate amount and the characteristics of the discharge;

d. The stream(s) affected by the discharge;
e. The circumstances which created the discharge;
f. The name and telephone number of the person(s) who have knowledge of these circumstances;
g. What remedial steps are being taken; and
h. The name and telephone number of the person(s) responsible for such remedial steps.

2. The permittee shall report noncompliance that is the result of any spill or discharge which may endanger human health or the environment within thirty (30) minutes of discovery by calling the 24-Hour Emergency Hotline toll-free at (800) 282-9378. The permittee shall also report the spill or discharge by e-mail or telephone within twenty-four (24) hours of discovery in accordance with B.1 above.

C. When the telephone option is used for the noncompliance reports required by A and B, the permittee shall submit to the appropriate Ohio EPA district office a confirmation letter and a completed noncompliance report within five (5) days of the discovery of the noncompliance. This follow up report is not necessary for the e-mail option which already includes a completed noncompliance report.

D. If the permittee is unable to meet any date for achieving an event, as specified in a schedule of compliance in their permit, the permittee shall submit a written report to the appropriate Ohio EPA district office within fourteen (14) days of becoming aware of such a situation. The report shall include the following:

1. The compliance event which has been or will be violated;
2. The cause of the violation;
3. The remedial action being taken;
4. The probable date by which compliance will occur; and
5. The probability of complying with subsequent and final events as scheduled.

E. The permittee shall report all other instances of permit noncompliance not reported under paragraphs A or B of this section on their monthly DMR submission. The DMR shall contain comments that include the information listed in paragraphs A or B as appropriate.

F. If the permittee becomes aware that it failed to submit an application, or submitted incorrect information in an application or in any report to the director, it shall promptly submit such facts or information.

13. RESERVED

14. DUTY TO MITIGATE

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

15. AUTHORIZED DISCHARGES

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than, or at a level in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such violations may result in the imposition of civil and/or criminal penalties as provided for in Section 309 of the Act and Ohio Revised Code Sections 6111.09 and 6111.99.

16. DISCHARGE CHANGES

The following changes must be reported to the appropriate Ohio EPA district office as soon as practicable:

A. For all treatment works, any significant change in character of the discharge which the permittee knows or has reason to believe has occurred or will occur which would constitute cause for modification or revocation and reissuance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Notification of permit changes or anticipated noncompliance does not stay any permit condition.

B. For publicly owned treatment works:

1. Any proposed plant modification, addition, and/or expansion that will change the capacity or efficiency of the plant;

2. The addition of any new significant industrial discharge; and

3. Changes in the quantity or quality of the wastes from existing tributary industrial discharges which will result in significant new or increased discharges of pollutants.

C. For non-publicly owned treatment works, any proposed facility expansions, production increases, or process modifications, which will result in new, different, or increased discharges of pollutants.

Following this notice, modifications to the permit may be made to reflect any necessary changes in permit conditions, including any necessary effluent limitations for any pollutants not identified and limited herein. A determination will also be made as to whether a National Environmental Policy Act (NEPA) review will be required. Sections 6111.44 and 6111.45, Ohio Revised Code, require that plans for treatment works or improvements to such works be approved by the Director of the Ohio EPA prior to initiation of construction.

D. In addition to the reporting requirements under 40 CFR 122.41(l) and per 40 CFR 122.42(a), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

1. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis of any toxic pollutant which is not limited in the permit. If that discharge will exceed the highest of the "notification levels" specified in 40 CFR Sections 122.42(a)(1)(i) through 122.42(a)(1)(iv).

2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" specified in 122.42(a)(2)(i) through 122.42(a)(2)(iv).

17. TOXIC POLLUTANTS

The permittee shall comply with effluent standards or prohibitions established under Section 307 (a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement. Following establishment of such standards or prohibitions, the Director shall modify this permit and so notify the permittee.

18. PERMIT MODIFICATION OR REVOCATION

A. After notice and opportunity for a hearing, this permit may be modified or revoked, by the Ohio EPA, in whole or in part during its term for cause including, but not limited to, the following:

1. Violation of any terms or conditions of this permit;

2. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

3. Change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

B. Pursuant to rule 3745-33-04, Ohio Administrative Code, the permittee may at any time apply to the Ohio EPA for modification of any part of this permit. The filing of a request by the permittee for a permit modification or revocation does not stay any permit condition. The application for modification should be received by the appropriate Ohio EPA district office at least ninety days before the date on which it is desired that the modification become effective. The application shall be made only on forms approved by the Ohio EPA.

19. TRANSFER OF OWNERSHIP OR CONTROL

This permit may be transferred or assigned, and a new owner or successor can be authorized to discharge from this facility, provided the following requirements are met:

A. The permittee shall notify the succeeding owner or successor of the existence of this permit by a letter, a copy of which shall be forwarded to the appropriate Ohio EPA district office. The copy of that letter will serve as the permittee's notice to the Director of the proposed transfer. The copy of that letter shall be received by the appropriate Ohio EPA district office sixty (60) days prior to the proposed date of transfer;

B. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgement that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) shall be submitted to the appropriate Ohio EPA district office within sixty days after receipt by the district office of the copy of the letter from the permittee to the succeeding owner;

At any time during the sixty (60) day period between notification of the proposed transfer and the effective date of the transfer, the Director may prevent the transfer if he concludes that such transfer will jeopardize compliance with the terms and conditions of the permit. If the Director does not prevent transfer, he will modify the permit to reflect the new owner.

20. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act.

21. SOLIDS DISPOSAL

Collected grit and screenings, and other solids other than sewage sludge or biosolids, shall be disposed of in such a manner as to prevent entry of those wastes into waters of the state, and in accordance with all applicable laws and rules.

22. CONSTRUCTION AFFECTING NAVIGABLE WATERS

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

23. CIVIL AND CRIMINAL LIABILITY

Except as exempted in the permit conditions on UNAUTHORIZED DISCHARGES or UPSETS, nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

24. STATE LAWS AND REGULATIONS

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act.

25. PROPERTY RIGHTS

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

26. UPSET

The provisions of 40 CFR Section 122.41(n), relating to "Upset," are specifically incorporated herein by reference in their entirety. For definition of "upset," see Part III, Paragraph 1, DEFINITIONS.

27. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

28. SIGNATORY REQUIREMENTS

All applications submitted to the Director shall be signed and certified in accordance with the requirements of 40 CFR 122.22.

All reports submitted to the Director shall be signed and certified in accordance with the requirements of 40 CFR Section 122.22.

29. OTHER INFORMATION

A. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

B. ORC 6111.99 provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $25,000 per violation.

C. ORC 6111.99 states that any person who knowingly makes any false statement, representation, or

certification in any record or other document submitted or required to be maintained under this permit including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $25,000 per violation.

D. ORC 6111.99 provides that any person who violates Sections 6111.04, 6111.042, 6111.05, or division (A) of Section 6111.07 of the Revised Code shall be fined not more than $25,000 or imprisoned not more than one year, or both.

30. NEED TO HALT OR REDUCE ACTIVITY

40 CFR 122.41(c) states that it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with conditions of this permit.

31. APPLICABLE FEDERAL RULES

All references to 40 CFR in this permit mean the version of 40 CFR which is effective as of the effective date of this permit.

32. AVAILABILITY OF PUBLIC SEWERS

Notwithstanding the issuance or non-issuance of an NPDES permit to a semi-public disposal system, whenever the sewage system of a publicly owned treatment works becomes available and accessible, the permittee operating any semi-public disposal system shall abandon the semi-public disposal system and connect it into the publicly owned treatment works.

National Pollutant Discharge Elimination System (NPDES) Permit Program

FACT SHEET

Regarding an NPDES Permit To Discharge to Waters of the State of Ohio
for **Clean Energy Future - Trumbull, LLC Trumbull Energy Center**

Public Notice No.: 216336
Public Notice Date: November 25, 2025
Comment Period Ends: December 25, 2025

Ohio EPA Permit No.: **3IN00398*BD**
Application No.: **OH0148474**

Name and Address of Applicant:

Clean Energy Future - Trumbull, LLC
910 Sheraton Drive, Suite 3F
Mars, Pennsylvania 16046

Name and Address of Facility Where Discharge Occurs:

Trumbull Energy Center
7733 Tod Avenue SW
Lordstown, Ohio 44481
Trumbull County

Receiving Water: **Mud Creek**

Subsequent Stream Network: **Mahoning River to Beaver River to Ohio River**

INTRODUCTION

Development of a Fact Sheet for NPDES permits is mandated by Title 40 of the Code of Federal Regulations (40CFR), Section 124.8 and 124.56. This document fulfills the requirements established in those regulations by providing the information necessary to inform the public of actions proposed by the Ohio Environmental Protection Agency (Ohio EPA), as well as the methods by which the public can participate in the process of finalizing those actions.

This Fact Sheet is prepared in order to document the technical basis and risk management decisions that are considered in the determination of water quality based NPDES Permit effluent limitations. The technical basis for the Fact Sheet may consist of evaluations of promulgated effluent guidelines, existing effluent quality, instream biological, chemical and physical conditions, and the relative risk of alternative effluent limitations. This Fact Sheet details the discretionary decision-making process empowered to the Director by the Clean Water Act (CWA) and Ohio Water Pollution Control Law (Ohio Revised Code [ORC] 6111). Decisions to award variances to Water Quality Standards (WQS) or promulgated effluent guidelines for economic or technological reasons will also be justified in the Fact Sheet where necessary.

Antidegradation provisions in Ohio Administrative Code (OAC) Chapter 3745-1 describe the conditions under which water quality may be lowered in surface waters. No anti-degradation review was applied to this renewal permit.

Effluent limits based on available treatment technologies are required by Section 301(b) of the CWA. Many of these have already been established by the United States Environmental Protection Agency (U.S. EPA) in the effluent guideline regulations (a.k.a. categorical regulations) for industry categories in 40 CFR Parts 405-499. Technology-based regulations for publicly-owned treatment works are listed in the Secondary Treatment Regulations (40 CFR Part 133). If regulations have not been established for a category of dischargers, the director may establish technology-based limits based on best professional judgment (BPJ).

Ohio EPA reviews the need for water-quality-based limits on a pollutant-by-pollutant basis. Wasteload allocations (WLAs) are used to develop these limits based on the pollutants that have been detected in the

discharge, and the receiving water's assimilative capacity. The assimilative capacity depends on the flow in the water receiving the discharge, and the concentration of the pollutant upstream. The greater the upstream flow, and the lower the upstream concentration, the greater the assimilative capacity is. Assimilative capacity may represent dilution (as in allocations for metals), or it may also incorporate the break-down of pollutants in the receiving water (as in allocations for oxygen-demanding materials).

The need for water-quality-based limits is determined by comparing the WLA for a pollutant to a measure of the effluent quality. The measure of effluent quality is called Projected Effluent Quality (PEQ). This is a statistical measure of the average and maximum effluent values for a pollutant. As with any statistical method, the more data that exists for a given pollutant, the more likely that PEQ will match the actual observed data. If there is a small data set for a given pollutant, the highest measured value is multiplied by a statistical factor to obtain a PEQ; for example if only one sample exists, the factor is 6.2, for two samples - 3.8, for three samples - 3.0. The factors continue to decline as samples sizes increase. These factors are intended to account for effluent variability, but if the pollutant concentrations are fairly constant, these factors may make PEQ appear larger than it would be shown to be if more sample results existed.

SUMMARY OF PERMIT CONDITIONS

This permit contains the following outfalls and/or monitoring stations: 3IN00398001 and 3IN00398601.

Final effluent limitations are recommended for ammonia, temperature, total residual chlorine, total filterable residue, oil & grease, pH, and acute toxicity.

Based on the WLA, the daily maximum ammonia limits have been reduced.

A compliance schedule is included for the facility to submit quantitative effluent discharge data for all parameters required by NPDES Application Form 2C.

Several conditions have been included in Part II of the permit that address the following requirements: whole effluent toxicity (WET) testing, discharge prohibitions required by federal treatment standards, and outfall signage.

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PROCEDURES FOR PARTICIPATION IN THE FORMULATION OF FINAL DETERMINATIONS

The draft action shall be issued as a final action unless the Director revises the draft after consideration of the record of a public meeting or written comments, or upon disapproval by the Administrator of the U.S. Environmental Protection Agency.

Within thirty (30) days of the date of the Public Notice, any person may request or petition for a public meeting for presentation of evidence, statements or opinions. The purpose of the public meeting is to obtain additional evidence. Statements concerning the issues raised by the party requesting the meeting are invited. Evidence may be presented by the applicant, the state, and other parties, and following presentation of such evidence other interested persons may present testimony of facts or statements of opinion.

Requests for public meetings shall be in writing and shall state the action of the Director objected to, the questions to be considered, and the reasons the action is contested. Such requests should be emailed to epa.hclerk@epa.ohio.gov or mailed to:

Legal Records Section
Ohio Environmental Protection Agency
P.O. Box 1049
Columbus, Ohio 43216-1049

Interested persons are invited to submit written comments upon the discharge permit. Comments should be submitted by email to epa.dswcomments@epa.ohio.gov (preferred method) or by mail no later than 30 days after the date of this Public Notice. Deliver or mail all comments to:

Ohio Environmental Protection Agency
Attention: Division of Surface Water
Permits Processing Unit
P.O. Box 1049
Columbus, Ohio 43216-1049

The Ohio EPA permit number and Public Notice numbers should appear on each page of any submitted comments. All comments received no later than 30 days after the date of the Public Notice will be considered.

Citizens may conduct file reviews regarding specific companies or sites. Appointments are necessary to conduct file reviews, because requests to review files have increased dramatically in recent years. The first 250 pages copied are free. For requests to copy more than 250 pages, there is a five-cent charge for each page copied. Payment is required by check or money order, made payable to Treasurer State of Ohio.

For additional information about this fact sheet or the draft permit, contact John Schmidt, (330) 963-1175, john.schmidt@epa.ohio.gov, or Erm Gomes, (330) 963-1196, erm.gomes@epa.ohio.gov.

INFORMATION REGARDING CERTAIN WATER QUALITY BASED EFFLUENT LIMITS

This draft permit may contain proposed water-quality-based effluent limits (WQBELs) for parameters that are not priority pollutants. (See the following link for a list of the priority pollutants: https://epa.ohio.gov/static/Portals/35/pretreatment/Pretreatment_Program_Priority_Pollutant_Detection_Limits.pdf. In accordance with ORC 6111.03(J)(3), the Director established these WQBELs after considering, to the extent consistent with the Federal Water Pollution Control Act, evidence relating to the technical feasibility and economic reasonableness of removing the polluting properties from those wastes and to evidence relating to

conditions calculated to result from that action and their relation to benefits to the people of the state and to accomplishment of the purposes of this chapter. This determination was made based on data and information

available at the time the permit was drafted, which included the contents of the timely submitted NPDES permit renewal application, along with any and all pertinent information available to the Director.

This public notice allows the permittee to provide to the Director for consideration during this public comment period additional site-specific pertinent and factual information with respect to the technical feasibility and economic reasonableness for achieving compliance with the proposed final effluent limitations for these parameters. The permittee shall email to epa.dswcomments@epa.ohio.gov (preferred method) or deliver or mail this information to:

Ohio Environmental Protection Agency
Attention: Division of Surface Water
Permits Processing Unit
P.O. Box 1049
Columbus, Ohio 43216-1049

Should the applicant need additional time to review, obtain or develop site-specific pertinent and factual information with respect to the technical feasibility and economic reasonableness of achieving compliance with these limitations, a written request for any additional time shall be sent to the above address no later than 30 days after the Public Notice Date on Page 1.

Should the applicant determine that compliance with the proposed WQBELs for parameters other than the priority pollutants is technically and/or economically unattainable, the permittee may submit an application for a variance to the applicable WQS used to develop the proposed effluent limitation in accordance with the terms and conditions set forth in OAC 3745-33-07(D). The permittee shall submit this application to the above address no later than 30 days after the Public Notice Date.

Alternately, the applicant may propose the development of site-specific WQS pursuant to OAC 3745-1-39. The permittee shall submit written notification regarding their intent to develop site specific WQS for parameters that are not priority pollutants to the above address no later than 30 days after the Public Notice Date.

LOCATION OF DISCHARGE/RECEIVING WATER USE CLASSIFICATION

Trumbull Energy Center is proposing to discharge to Mud Creek at River Mile 7.0. Figure 1 shows the approximate location of the facility.

This segment of Mud Creek is described by Ohio EPA River Code: 18-019, 12-digit Watershed Assessment Unit (WAU) Code: 050301030602, County: Trumbull, Ecoregion: Erie Drift Plain. Mud Creek is designated for the following uses under Ohio's Water Quality Standards (OAC 3745-1-25): Warmwater Habitat (WWH), Agricultural Water Supply (AWS), Industrial Water Supply (IWS), and Primary Contact Recreation (PCR).

Use designations define the goals and expectations of a waterbody. These goals are set for aquatic life protection, recreation use and water supply use, and are defined in the Ohio WQS (OAC 3745-1-07). The use designations for individual waterbodies are listed in rules -08 through -32 of the Ohio WQS. Once the goals are set, numeric WQS are developed to protect these uses. Different uses have different water quality criteria.

Use designations for aquatic life protection include habitats for coldwater fish and macroinvertebrates, warmwater aquatic life and waters with exceptional communities of warmwater organisms. These uses all meet the goals of the federal CWA. Ohio WQS also include aquatic life use designations for waterbodies which cannot meet the CWA goals because of human-caused conditions that cannot be remedied without causing fundamental changes to land use and widespread economic impact. The dredging and clearing of some small streams to support agricultural or urban drainage is the most common of these conditions. These streams are given Modified Warmwater or Limited Resource Water designations.

Recreation uses are defined by the depth of the waterbody and the potential for wading or swimming. Uses are defined for bathing waters, swimming/canoeing (Primary Contact Recreation) and wading only (Secondary Contact which are generally waters too shallow for swimming or canoeing).

Water supply uses are defined by the actual or potential use of the waterbody. Public Water Supply designations apply near existing water intakes so that waters are safe to drink with standard treatment. Most other waters are designated for agricultural water supply and industrial water supply.

FACILITY DESCRIPTION

The proposed Trumbull Energy Center (TEC) will provide 940 MW of electrical capacity to residents of the region. Commercial operation is projected to commence in 2026. The facility will be combined cycle gas turbine plant, utilizing clean-burning natural gas technology and state of the art emissions control technologies. A combined cycle system is a combination of one or more combustion turbine electric generating units operating in conjunction with one or more steam turbine electric generating units.

A schematic of a typical combined cycle process is shown in Figure 2. Compressed air mixes with fuel that is heated to a very high temperature. The hot air-fuel mixture moves through the gas turbine blades, making them spin. The fast-spinning turbine drives a generator that converts a portion of the spinning energy into electricity. The exhaust gases exiting the combustion turbine still contain useful waste heat, so they are directed to heat recovery steam generators (HRSGs) to generate steam to drive an additional turbine. The steam turbine sends its energy to the generator drive shaft, where it is converted into additional electricity. Thus, combined cycle systems use steam turbine technology to increase the efficiency of the combustion turbines.

The process operations at Trumbull Energy Center are classified under Standard Industrial Classification (SIC) category 4911, Electric Services. The process wastewaters generated from these operations are regulated under 40 CFR 423, "Steam Electric Power Generating Point Source Category", Subpart 423.15 "New Source Performance Standards (NSPS)". Effluent limitation guidelines are national regulatory standards for wastewater

discharged to surface waters and municipal sewage treatment plants. ELGs are technology-based regulations based on the performance of demonstrated wastewater control and treatment technologies.

The Steam Electric Power Generating ELGs apply to "…discharges resulting from the operation of a generating unit by an establishment primarily engaged in the generation of electricity for distribution and sale which results primarily from a process utilizing fossil-type fuel (coal, oil, or gas) or nuclear fuel in conjunction with a thermal cycle employing the steam water system as the thermodynamic medium." Waste streams generated at combined cycle systems typically consist of the following:

> Condenser Cooling Water: A constant flow of cooling water is required to maintain steam condensation and a low pressure in the condenser. Plants typically use either once-through cooling water systems or recirculating cooling water systems to condense the steam from the process. In once-through cooling water systems, the cooling water is withdrawn from a body of water, flows through the condenser, and is discharged back to the body of water. A recirculating cooling system recirculates the cooling water required to maintain steam condensation and a low pressure in the condenser. Fresh water is periodically added to the cooling water system to make up for evaporative losses. To prevent minerals from building up to unacceptable levels in the recirculating system, a volume of water must be discharged periodically to purge the minerals from the system, which is referred to as "cooling tower blowdown."
>
> Low Volume Wastes: As defined by the effluent guidelines, low volume wastes include a variety of waste streams, such as wastewater associated with wet scrubber air pollution control systems, ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, and recirculating house service water systems.

Information received from Trumbull Energy Center indicates that there will not be any discharges of chemical cleaning wastes. If generated, such wastes will need to hauled offsite for proper disposal.

DESCRIPTION OF PROPOSED DISCHARGE

Figure 3 provides a flow schematic of the wastewater sources and supplies associated with the proposed Trumbull Energy Center. Trumbull Energy Center plans to obtain potable water from the City of Warren to serve its planned production and sanitary facilities. The City presently adds both chlorine and ammonia to the water for purposes of disinfection.

The present design calls for all plant wastewater sources, excluding sanitary flows, to be collected and routed to the plant's recirculating cooling tower. The blowdown discharge from this system will be an average of 0.62 MGD and a maximum of 1.1 MGD. The cooling water blowdown will combine with site storm water in a cooling pond prior to discharge via Outfall 3IN00398001 to Mud Creek.

Internal Station 3IN00398601 represents treated wastewater from boiler blowdown, water treatment processes and other service waters prior to the cooling tower. These wastewaters are considered Low Volume Discharges under the Steam Electric Generating Category treatment standards and will be treated by the following processes:

- Oil/water separation (misc. service waters only)

Sanitary wastes from the facility will be discharged to the Trumbull County sanitary sewer system that is tributary to the City of Warren Water Pollution Control Plant.

Table 2 presents anticipated/estimated chemical concentrations for the waste streams tributary to Outfall 3IN00398001. This information is from the facility's NPDES application.

Table 3 summarizes the calculated average and maximum PEQ values for select parameters at Outfall 3IN00398001.

Attachment 1 lists the applicable ELGs for Trumbull Energy Center. Federal and State laws and regulations require that dischargers meet both the ELGs and any standards needed to comply with state WQS. Permit limits are based on the more stringent of the two.

Trumbull Energy Center obtains all water used for cooling purposes from the City of Warren Water Treatment plant. As such, CWA Section 316(b) cooling water intake regulations do not apply to this facility.

ASSESSMENT OF IMPACT ON RECEIVING WATERS

The attainment status of Mud Creek is reported in the 2024 *Ohio Integrated Water Quality Monitoring and Assessment Report* (Integrated Report). An assessment of the impact of a permitted point source on the immediate receiving waters includes an evaluation of the available chemical/physical, biological, and habitat data which have been collected by Ohio EPA pursuant to the Five-Year Basin Approach for Monitoring and NPDES Reissuance. Other data may be used provided it was collected in accordance with Ohio EPA methods and protocols as specified by the Ohio WQS and Ohio EPA guidance documents. Other information which may be evaluated includes, but is not limited to: NPDES permittee self-monitoring data; effluent and mixing zone bioassays conducted by Ohio EPA, the permittee, or U.S. EPA.

In evaluating this data, Ohio EPA attempts to link environmental stresses and measured pollutant exposure to the health and diversity of biological communities. Stresses can include pollutant discharges (permitted and unpermitted), land use effects, and habitat modifications. Indicators of exposure to these stresses include whole effluent toxicity tests, fish tissue chemical data, and fish health biomarkers (for example, fish blood tests).

Use attainment is a term which describes the degree to which environmental indicators are either above or below criteria specified by the Ohio WQS (OAC 3745-1). Assessing use attainment status for aquatic life uses primarily relies on the Ohio EPA biological criteria (OAC 3745-1-07; Table 7-1). These criteria apply to rivers and streams outside of mixing zones. Numerical biological criteria are based on measuring several characteristics of the fish and macroinvertebrate communities; these characteristics are combined into multimetric biological indices including the Index of Biotic Integrity and modified Index of Well-Being, which indicate the response of the fish community, and the Invertebrate Community Index, which indicates the response of the macroinvertebrate community. Numerical criteria are broken down by ecoregion, use designation, and stream or river size. Ohio has five ecoregions defined by common topography, land use, potential vegetation and soil type.

Three attainment status results are possible at each sampling location -full, partial, or non-attainment. Full attainment means that all of the applicable indices meet the biocriteria. Partial attainment means that one or more of the applicable indices fails meet the biocriteria. Nonattainment means that either none of the applicable indices meet the biocriteria or one of the organism groups indicates poor or very poor performance. An aquatic life use attainment table (see Table 4) is constructed based on the sampling results and is arranged from upstream to downstream and includes the sampling locations indicated by river mile, the applicable biological indices, the use attainment status (i.e., full, partial, or non), the Qualitative Habitat Evaluation Index, and comments and observations for each sampling location.

The full Integrated Report is available through the Ohio EPA Division of Surface Water website at:

https://epa.ohio.gov/divisions-and-offices/surface-water/reports-data/ohio-integrated-water-quality-monitoring-and-assessment-report

The Mud Creek watershed assessment unit, which includes the receiving stream in the vicinity of the proposed Trumbull Energy Center, is listed as impaired for aquatic life and recreation uses pursuant to Section 303(d) of the Clean Water Act. Sources of the impairment are listed as a dam or impoundment in the 2018 *Mahoning River Water Quality Report*. Paramount Lake is formed by a dam at approximately River Mile 0.05 and another impoundment is created by a dam at Westwood Lake Park at approximately River Mile 1.0, effectively blocking upstream fish migration. Macroinvertebrate communities upstream of the dam were in compliance with biological criteria. Thus, the proposed discharge from Trumbull Energy Center will not contribute to the existing causes of impairment.

The Total Maximum Daily Load (TMDL) program focuses on identifying and restoring polluted rivers, streams, lakes and other surface water bodies. TMDLs are prepared for waters identified as impaired on the 303(d) list in Ohio's Integrated Report. A TMDL is a written, quantitative assessment of water quality problems in a water body and contributing sources of pollution. It specifies the amount a pollutant needs to be reduced to meet water quality standards (WQS), allocates pollutant load reductions, and provides the basis for taking actions needed to restore a water body.

Comprehensive chemical, physical, and biological monitoring was conducted in the lower Mahoning River basin in 2011 and 2013 to identify pollutants impairing beneficial uses and to support the development of TMDLs for those pollutants. Ohio EPA's 2018 technical report on the findings of the basin survey, *Biological and Water Quality Study of the Lower Mahoning River Watershed, 2011 and 2013,* is available at:

https://dam.assets.ohio.gov/image/upload/epa.ohio.gov/Portals/35/tmdl/TSD/Lower%20Mahoning%202013/2013-LMAHO-2_Mahoning%20TSD_FINAL.pdf

Development of TMDLs for pollutants impairing designated or recommended aquatic life uses is presently under development. Status of reports and analyses are available via the Mahoning River (lower) tab at:

https://epa.ohio.gov/divisions-and-offices/surface-water/reports-data/mahoning-river-watershed

DEVELOPMENT OF WATER-QUALITY-BASED EFFLUENT LIMITS

Determining appropriate effluent concentrations is a multiple-step process in which parameters are identified as likely to be discharged by a facility, evaluated with respect to Ohio water quality criteria, and examined to determine the likelihood that the existing effluent could violate the calculated limits.

Parameter Selection

Projected/estimated effluent data for Trumbull Energy Center were used to determine what parameters should undergo wasteload allocation. The parameters discharged are identified by the data submitted to Ohio EPA in the NPDES application. This data is evaluated statistically, and PEQ values are calculated for each pollutant. Average PEQ (PEQ_{avg}) values represent the 95^{th} percentile of monthly average data, and maximum PEQ (PEQ_{max}) values represent the 95^{th} percentile of all data points (see Table 3).

The PEQ values are used according to Ohio rules to compare to applicable WQS and allowable WLA values for each pollutant evaluated. Initially, PEQ values are compared to the applicable average and maximum WQS. If both PEQ values are less than 25 percent of the applicable WQS, the pollutant does not have the reasonable potential to cause or contribute to exceedances of WQS, and no WLA is done for that parameter. If either

PEQ_{avg} or PEQ_{max} is greater than 25 percent of the applicable WQS, a WLA is conducted to determine whether the parameter exhibits reasonable potential and needs to have a limit or if monitoring is required (see Table 5).

For more information on PEQ calculations, see Modeling Guidance #1 at the following webpage: https://epa.ohio.gov/static/Portals/35/guidance/model1.pdf

Wasteload Allocation

For those parameters that require a WLA, the results are based on the uses assigned to the receiving waterbody in OAC 3745-1. Dischargers are allocated pollutant loadings/concentrations based on the Ohio WQS (OAC 3745-1). Most pollutants are allocated by a mass-balance method because they do not degrade in the receiving water. For free flowing streams, WLAs using this method are done using the following general equation: Discharger WLA = (downstream flow x WQS) - (upstream flow x background concentration). Discharger WLAs are divided by the discharge flow so that the allocations are expressed as concentrations.

The applicable waterbody uses for this facility's discharge and the associated stream design flows are as follows:

Aquatic life (Warmwater Habitat)		
Toxics (metals, organics, etc.)	Average	Annual 7Q10
	Maximum	Annual 1Q10
Ammonia	Average	Summer 30Q10
		Winter 30Q10
Wildlife		Annual 90Q10
Agricultural Water Supply		Harmonic mean flow
Human Health (nondrinking)		Harmonic mean flow

Allocations are developed using a percentage of stream design flow as specified in Table 6, and allocations cannot exceed the Inside Mixing Zone Maximum (IMZM) criteria. Where noted, the background flow statistics have been updated utilizing the web-based United States Geological Survey (USGS) StreamStats Ver. 4.29.3 software.

The data used in the WLA are listed in Table 5 and Table 6. The WLA results to maintain all applicable criteria are presented in Table 7.

Whole Effluent Toxicity Wasteload Allocation

Whole effluent toxicity (WET) is the total toxic effect of an effluent on aquatic life measured directly with a toxicity test. Acute WET measures short term effects of the effluent while chronic WET measures longer term and potentially more subtle effects of the effluent.

WQS for WET are expressed in Ohio's narrative "free from" WQS rule [OAC 3745-1-04(D)]. These "free froms" are translated into toxicity units (TUs) by the associated WQS Implementation Rule (OAC 3745-2-09). WLAs can then be calculated using TUs as if they were water quality criteria.

The WLA calculations for WET are similar to those for aquatic life criteria - using the chronic toxicity unit (TUc) and 7Q10 flow for the average and the acute toxicity unit (TUa) and 1Q10 flow for the maximum. These values are the levels of effluent toxicity that should not cause instream toxicity during critical low-flow conditions. For Trumbull Energy Center, the WLA values for outfall 3IN00398001 are 0.3 TUa and 1.03 TUc.

According to the data in Table 6, the dilution ratio for Trumbull Energy Center to the receiving stream is approximately 1.03 to 1.

Stream Dilution Ratio = [7Q10 + (001 flow rate)]/(001 flow rate) = (0.03 + 0.96)/0.96 = 1.03

The chronic toxicity unit (TU_c) is defined as 100 divided by the estimate of the effluent concentration which causes a 25% reduction in growth or reproduction of test organisms (IC_{25}):

$TU_c = 100/IC_{25}$

This equation applies outside the mixing zone for warmwater, modified warmwater, exceptional warmwater, coldwater, and seasonal salmonid use designations except when the following equation is more restrictive (*Ceriodaphnia dubia* only):

TU_c = 100/geometric mean of No Observed Effect Concentration and Lowest Observed Effect Concentration

The acute toxicity unit (TU_a) is defined as 100 divided by the concentration in water having 50% chance of causing death to aquatic life (LC_{50}) for the most sensitive test species:

$TU_a = 100/LC_{50}$

This equation applies outside the mixing zone for warmwater, modified warmwater, exceptional warmwater, coldwater, and seasonal salmonid use designations.

When the acute WLA is less than 1.0 TU_a, it may be defined as:

Dilution Ratio (downstream flow to discharger flow)	Allowable Effluent Toxicity (percent effects in 100% effluent)
up to 2 to 1	30
greater than 2 to 1 but less than 2.7 to 1	40
2.7 to 1 to 3.3 to 1	50

Acute Dilution Ratio = [1Q10 + (001 flow rate)]/(001 flow rate) = (0.02 + 0.96)/0.96 = 1.02

The acute WLA for Trumbull Energy Center is 30 percent mortality in 100 percent effluent based on the dilution ratio of 1.02 to 1.

REASONABLE POTENTIAL/EFFLUENT LIMITS/MANAGEMENT DECISIONS

After appropriate effluent limits are calculated, the reasonable potential of the discharger to violate the WQS must be determined. Each parameter is examined and placed in a defined "group". Parameters that do not have a WQS or do not require a WLA based on the initial screening are assigned to either group 1 or 2. For the allocated parameters, the preliminary effluent limits (PEL) based on the most restrictive average and maximum WLAs are selected from Table 7. The average PEL (PEL_{avg}) is compared to the average PEQ (PEQ_{avg}) from Table 3, and the PEL_{max} is compared to the PEQ_{max}. Based on the calculated percentage of the allocated value [($PEQ_{avg} \div PEL_{avg}$) X 100, or ($PEQ_{max} \div PEL_{max}$) X 100)], the parameters are assigned to group 3, 4, or 5. The groupings are listed in Table 8.

The final effluent limits are determined by evaluating the groupings in conjunction with other applicable rules and regulations. Table 9 presents the final effluent limits and monitoring requirements proposed for Trumbull

Energy Center Outfall 3IN00398001 and Internal Monitoring Station 3IN000398601 and the basis for their recommendation. Unless otherwise indicated, the monitoring frequencies proposed in the permit are continued from the existing permit.

Outfall 3IN00398001

Temperature

Due to the small size of the receiving stream, monthly temperature limits, derived from Table 35-11(A) in OAC 3745-1-35, have been included in the permit (See Attachment 2). These limits are intended to ensure that the cooling systems at the proposed facility are properly operated and maintained to meet WQS. For months with split criteria, e.g. March, the permit limits have been averaged.

Oil and Grease

The limit proposed for oil & grease is based on application of Ohio WQS (OAC 3745-1-37). Ohio does not have an average WQS for oil and grease and, therefore, only a daily maximum concentration limit is proposed.

pH Minimum, pH Maximum, and pH Range Excursions

Limits recommended for pH, i.e. 6.5 - 9.0 S.U., are based on Ohio's Water Quality Standards (OAC 3745-1-35).

Trumbull Energy Center has installed monitoring equipment to continuously measure the pH of wastewater discharged via Outfall 3IN00198001. Pursuant to 40 CFR 401.17, permittees that continuously measure pH are required to maintain the pH of such wastewater within the specified permit range, except that excursions from the range are permitted subject to the following limitations and conditions:

(1) The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and

(2) No individual excursion from the range of pH values shall exceed 60 minutes.

An excursion is defined as "an unintentional and temporary incident in which the pH value of discharge wastewater exceeds the range set forth" in the NPDES permit.

Total Residual Chlorine

The proposed daily maximum limit for total residual chlorine is based on the WLA as limited by the Outside Mixing Zone Maximum (OMZM) WQS. The OMZM is a value calculated to avoid lethal conditions in the effluent mixing zone. Total residual chlorine monitors for all chlorine species dissolved in water, including free available chlorine. This limit is more restrictive than the New Source Performance Standards (NSPS) in 40 CFR 423.15 (b)(10) and, thus, more protective of the overall health of Mud Creek. Therefore, monitoring for free available chlorine is not necessary.

The effluent limit for total residual chlorine is less than the quantification level of 0.050 mg/L. However, a pollutant minimization program will not be required provided that the dosing rate of dechlorination chemicals, i.e. sodium bisulfite, ensures that the water quality based effluent limit will be met.

Ammonia (Summer and Winter) and Total Filterable Residue

The Ohio EPA risk assessment (Table 8) places these parameters in group 5. This placement indicates that the reasonable potential to exceed WQS exists and limits are necessary to protect water quality. For these parameters, the PEQ is greater than 100 percent of the WLA and/or the PEQ is between 75 and 100 percent of the WLA and certain conditions exist that increase the risk to the environment. Pollutants that meet this requirement must have permit limits under OAC 3745-33-07(A)(1).

Ammonia is expected to be present mainly due to its presence as a disinfection residual in the City of Warren potable water supply. Since this water will be recirculated numerous times through the cooling tower system, the potential exists that the concentration may increase prior to blowdown. The limits are based on the ammonia-nitrogen WQS in OAC 3745-1-35 (Tables 35-2 and 35-5).

Although the current wasteload would allow for a slight increase in the monthly limits for total filterable residue and ammonia (winter), the antibacksliding provision in OAC 3745-33-05(F) stipulate that "*Ohio NPDES permits may not be renewed, reissued or modified to contain effluent limitations that are less stringent than the comparable final effluent limitations in the previous permit…"* unless certain conditions are satisfied. None of the conditions identified in OAC 3745-33-05(F) are applicable to the permit renewal. In addition, the permittee did not request additional loading in the NPDES application for these parameters.

Phosphorus, Copper, Chromium, Mercury, and Zinc

Monitoring requirements are included for these parameters in order to determine their possible presence in the proposed discharge.

Whole Effluent Toxicity Reasonable Potential

The draft NPDES permit contains a maximum toxicity limit of 1.0 TUa. This limit is based on the WLA and is included to control toxicity from the discharge as a whole. Cooling tower discharges can contain toxic concentrations of total dissolved solids if not managed carefully. The macroinvertebrates that form a significant part of fish diets are particularly susceptible to TDS-related toxicity. As Ohio has no maximum standard for TDS, acute toxicity limits are needed to ensure that the no-rapid-lethality narrative WQS is met.

Internal Station 3IN000398601

The limits for total suspended Solids (TSS), oil and grease, and pH are based on the New Source Performance Standards (NSPS) effluent guideline limitations (ELGs) in 40 CFR 423.15 for Low Volume Wastewaters (LVW) at power plants. ELGs establish technology-based standards to limit the discharge of pollutants in industrial wastewater. Consistent with 40 CFR 122.45(h), the current permit includes monitoring and limits at internal station 3IN00398601. The ELGs are applied at this station to ensure that the treatment standards are met prior to combining with other waste streams. Federal rules at 40 CFR 125.3(f) prohibit attaining these standards by dilution. If monitoring was not performed at this location, it would not be possible to verify compliance with these standards due to dilution.

Additional Monitoring Requirements

Additional monitoring requirements proposed at the final effluent, influent and upstream/downstream stations are included for all facilities in Ohio and vary according to the type and size of the discharge. In addition to permit compliance, this data is used to assist in the evaluation of effluent quality and treatment plant performance and for designing plant improvements and conducting future stream studies.

OTHER REQUIREMENTS

Compliance Schedule

NPDES Application Form 2C Discharge Data - A compliance schedule has been included for the facility to submit quantitative data for the pollutants and parameters listed in NPDES Application Form 2C at Outfall 3IN00198001 within 13 months of the effective date of the permit.

Priority Pollutant Monitoring

Part II of the permit prohibits the discharge of detectable amounts of priority pollutants, including zinc and chromium, attributable to cooling tower maintenance chemicals in the cooling tower blowdown.

Outfall Signage

Part II of the permit includes requirements for the permittee to place and maintain a sign at each outfall to the receiving stream providing information about the discharge. Signage at outfalls is required pursuant to OAC 3745-33-08(A).

Part III

Part III of the permit details standard conditions that include monitoring, reporting requirements, compliance responsibilities, and general requirements.

Storm Water Compliance

Storm water permit conditions are not included in this permit because gas-fired power plants are not considered industrial storm water point sources under state and federal NPDES rules.

Figure 1. Location of Trumbull Energy Center

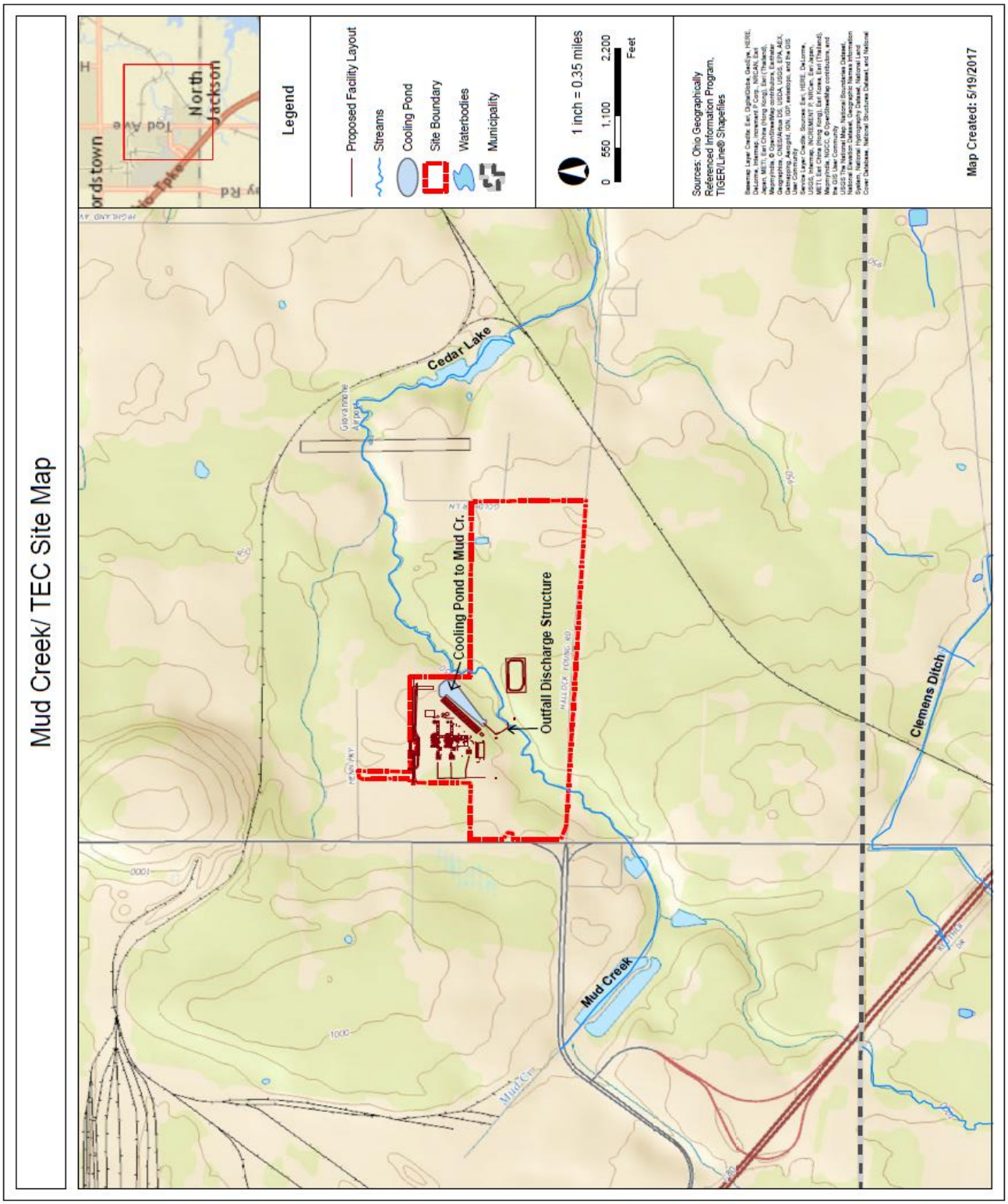

Figure 2: Schematic of a Typical Combined Cycle Process

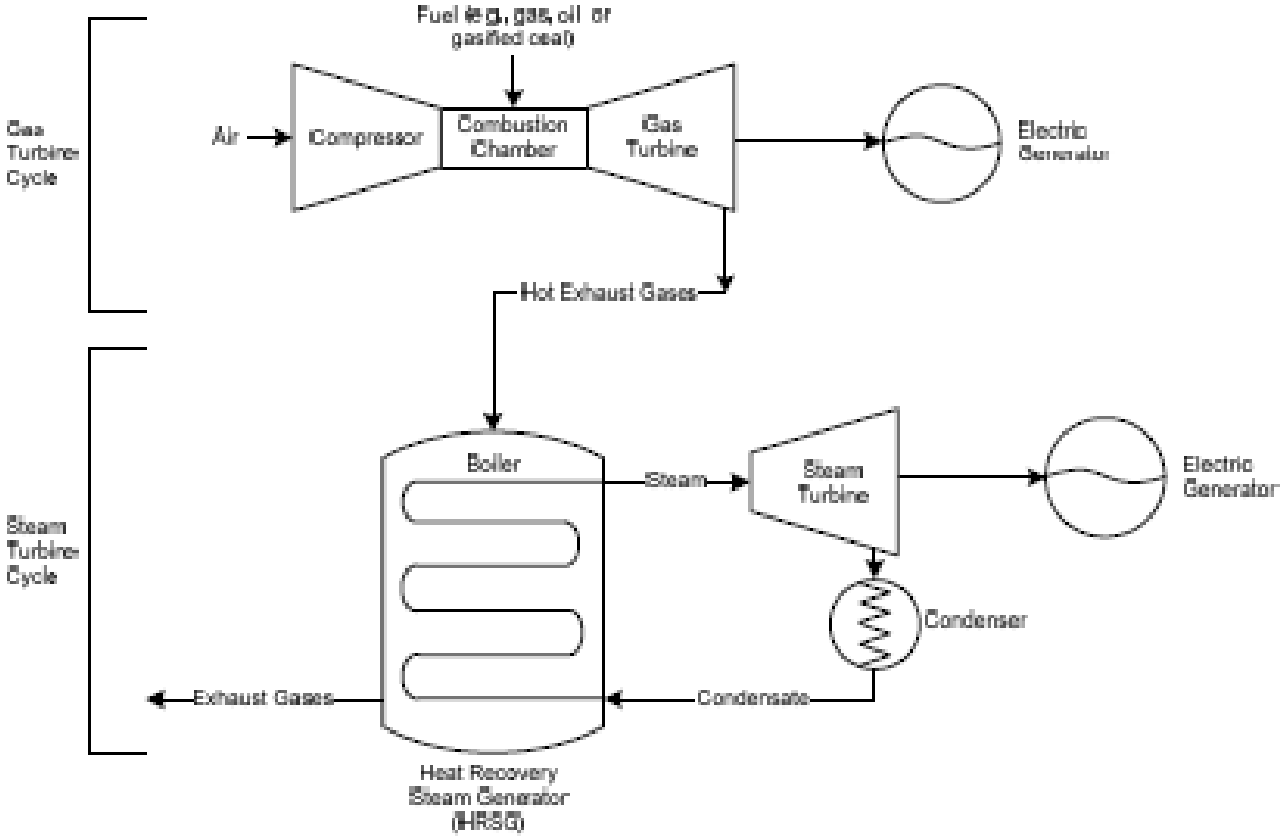

Figure 3. Trumbull Energy Center Water Balance Diagram

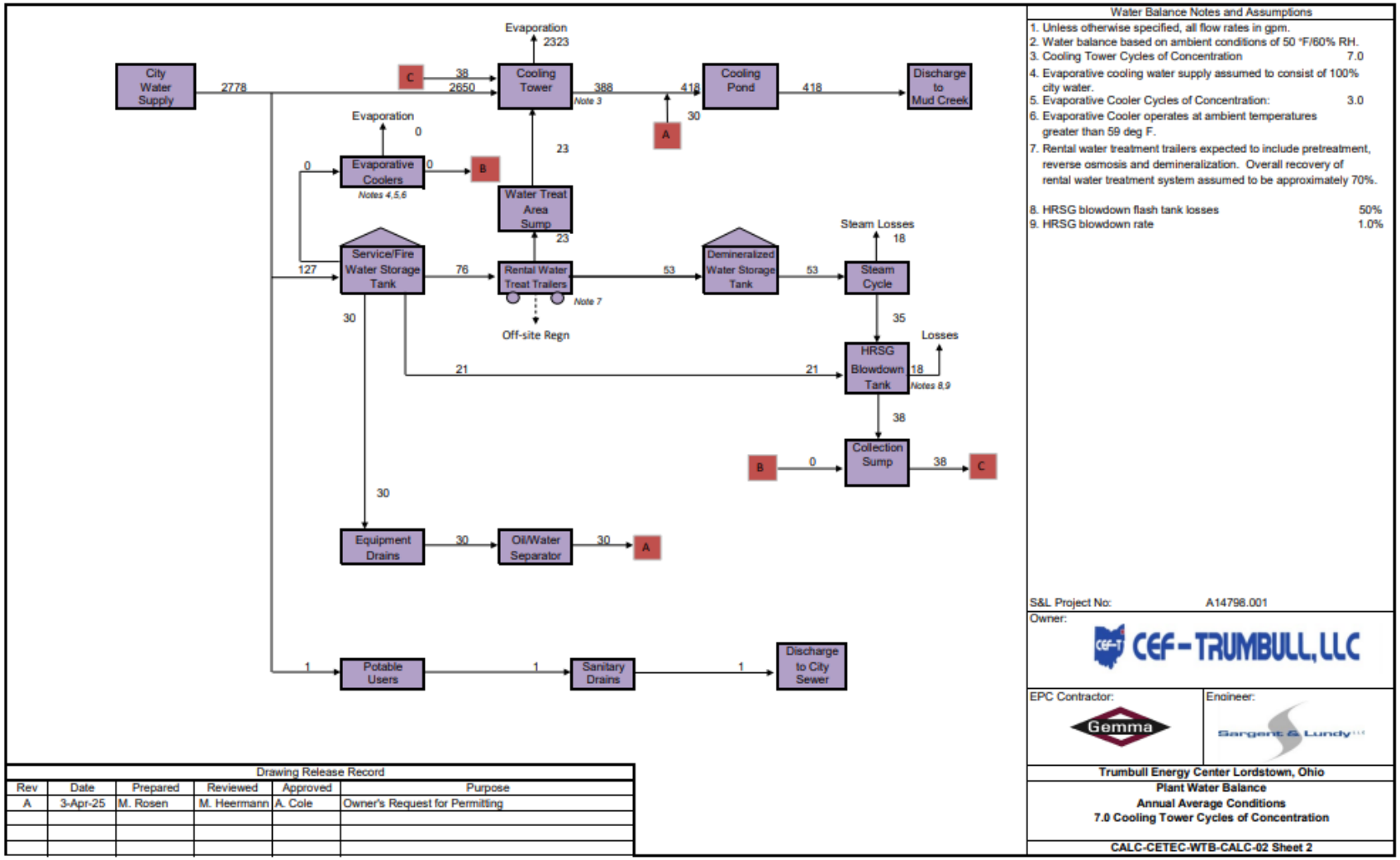

Table 1. Monitoring Stations, Wastewater Sources, Treatment Processes, Discharge Points, and Flow Rates

Station #	Wastewater Source	Treatment Utilized	Discharge/ Receiving Stream	Average Flow Rate (MGD)
001	Cooling Tower Blowdown, Low Volume Wastes, and Storm Water	Cooling Pond	Mud Creek	0.62
601	Low Volume Wastes	Oil Water Separator	Outfall 001	0.0432

Table 2. Projected Effluent Characterization Based on Form 2D Data

Parameter	Units	Max daily	Average
Biochemical Oxygen Demand	mg/L	--	--
Chemical Oxygen Demand	mg/L	--	--
Total Organic Carbon	mg/L	--	--
Total Suspended Solids	mg/L	--	--
Ammonia	mg/L	1.6	0.8
Nitrate	mg/L	1.61	1.61
Flow Rate	MGD	1.1	0.62
Temperature (Winter)	°C	11.1	8.3
Temperature (Summer)	°C	29.4	27.8
pH	SU	8.8	8.3
Barium	µg/L	74.74	74.74
Chlorine, Total Residual (*)	mg/L	0.019	0
Oil and Grease	mg/L	0.0003	0.0003
Phosphorus	mg/L	0.23	0.23
Sulfate	mg/L	420.1	420.1
Iron (Dissolved)	µg/L	230	230
Magnesium	µg/L	2587	2587
Manganese	µg/L	60	60
Residue, Total Filterable	mg/L	-	977.50

*Characterization based on maximum water quality criteria.

Table 3. Projected Effluent Quality

Parameter	Units	Number of Samples	Number > MDL	PEQ Average	PEQ Maximum
Ammonia (Summer)	mg/L	1	1	7.24	9.92
Ammonia (Winter)	mg/L	1	1	7.24	9.92
Chlorine, Total Residual	mg/L	--	--	--	--
Chromium - TR	µg/L	--	--	--	--
Copper - TR	µg/L	--	--	--	--
Residue, Total Filterable	mg/L	1	1	4424.2	6060.5
Mercury	ng/L	--	--	--	--
Zinc - TR	µg/L	--	--	--	--

MDL = analytical method detection limit
PEQ = projected effluent quality

Table 4. Use Attainment Table

Year	Location	River Mile	Use	Status	Causes	Sources
2013	Mud Creek @ Carson-Salt Springs Rd.	2.30	WWH	Partial	Fish-Passage Barrier, Direct Habitat Alterations	Dam or Impoundment
2013	Mud Creek @ Carson-Salt Springs Rd.	0.70	WWH	Partial	Fish-Passage Barrier, Direct Habitat Alterations	Dam or Impoundment
2013	Trib. to Mud Creek (0.84) @ West Park Ave.	0.5	WWH	Non	Natural Conditions (Flow or Habitat)	Natural Sources

WWH = warmwater habitat

Table 5. Water Quality Criteria in the Study Area

Parameter	Units	Outside Mixing Zone Criteria				Inside Mixing Zone Maximum
		Average			Maximum	
		Human Health	Agri-culture	Aquatic Life	Aquatic Life	
Ammonia (Summer)	mg/L	--	--	1.4	10.7	--
Ammonia (Winter)	mg/L	--	--	4	11.4	--
Chlorine, Total Residual	mg/L	--	--	0.011	0.019	0.038
Chromium - TR	µg/L	--	100	130	2700	5400
Copper - TR	µg/L	--	500	14	22	44
Residue, Total Filterable	mg/L	--	--	1500	--	--
Mercury	ng/L	12	10000	910	1700	3400
Zinc - TR	µg/L	26000	25000	180	180	360

TR = total recoverable

Table 6. Instream Conditions and Discharger Flow

Parameter	Units	Season	Value	Basis
Stream Flows				
1Q10	cfs	annual	0.02	Derived from USGS 03092090 - West Branch Mahoning River near Ravenna OH. Drainage Area at outfall = 2.28 square miles
7Q10	cfs	annual	0.05	
30Q10	cfs	summer	0.14	
		winter	0.57	
90Q10	cfs	annual	0.32	
Harmonic Mean	cfs	annual	0.356	
Mixing Assumption	%	average	100	Wasteload Allocation Procedure (OAC 3745-2)
		maximum	100	
Hardness, OMZ	mg/L	annual	162	2018 BWQR - Mahoning River; n=478
Hardness, IMZ	mg/L	annual	162	2018 BWQR - Mahoning River; n=478
pH	S.U.	summer	7.9	2018 BWQR - Mahoning River; n=410
		winter	7.9	2018 BWQR - Mahoning River; n=410
Temperature	ºC	summer	21.7	2018 BWQR - Mahoning River; n=408
		winter	8.8	Derived from Mahoning County Boardman WWTP (3PK00002) Station 801 in Mill Creek
Trumbull Energy Center flow	cfs (mgd)	annual	0.96 (0.62)	NPDES Permit Application
Background Water Quality				
Ammonia (Summer)	mg/L	summer	0.06	Ohio EPA; 2018; n=368; 160<MDL; 2018 BWQR - Mahoning River; Median Value
Ammonia (Winter)	mg/L	winter	0.12	Ohio EPA; 2018; n=21; 2<MDL; 2018 BWQR - Mahoning River; Median Value
Chlorine, Total Residual	mg/L	annual	0	No representative data available.
Chromium - TR	µg/L	annual	1	Ohio EPA; 2018; n=475; 448<MDL; 2018 BWQR - Mahoning River; Median Value
Copper - TR	µg/L	annual	1	Ohio EPA; 2018; n=475; 318<MDL; 2018 BWQR - Mahoning River; Median Value
Residue, Total Filterable	mg/L	annual	300	Ohio EPA; 2018; n=475; 0<MDL; 2018 BWQR - Mahoning River; Median Value
Mercury	ng/L	annual	0	No representative data available.
Zinc - TR	µg/L	annual	5	Ohio EPA; 2018; n=478; 363<MDL; 2018 BWQR - Mahoning River; Median Value

BWQR = *Background Water Quality Report*, Ohio EPA, December 2018
DA = drainage area
MDL = analytical method detection limit
n = number of samples
NPDES = National Pollutant Discharge Elimination System
Ohio EPA = Ohio Environmental Protection Agency
TR = total recoverable
USGS = United States Geological Survey

Table 7. Summary of Effluent Limits to Maintain Applicable Water Quality Criteria

Parameter	Units	Outside Mixing Zone Criteria				Inside Mixing Zone Maximum
		Average			Maximum	
		Human Health	Agri-culture	Aquatic Life	Aquatic Life	
Ammonia (Summer)	mg/L	--	--	1.6	10.7	--
Ammonia (Winter)	mg/L	--	--	6.3	11.4	--
Chlorine, Total Residual	mg/L	--	--	0.011	0.019	0.038
Chromium - TR	µg/L	--	158	137	2756	5400
Copper - TR	µg/L	--	791	15	22	44
Residue, Total Filterable	mg/L	--	--	1563	--	--
Mercury	ng/L	12	10000	910	1700	3400
Zinc - TR	µg/L	41175	39591	188	184	360

TR = total recoverable

Table 8. Parameter Assessment

Group 1: Due to a lack of numeric criteria, the following parameters could not be evaluated at this time.

No parameters placed in this group.

Group 2: PEQ < 25 percent of WQS or all data below minimum detection limit. WLA not required. No limit recommended; monitoring optional.

Chlorine, Total Residual	Chromium - TR	Copper - TR
Mercury	Zinc - TR	

Group 3: PEQmax < 50 percent of maximum PEL and PEQavg < 50 percent of average PEL. No limit recommended; monitoring optional.

No parameters placed in this group.

Group 4: PEQmax >= 50 percent, but < 100 percent of the maximum PEL or PEQavg >= 50 percent, but < 100 percent of the average PEL. Monitoring is appropriate.

No parameters placed in this group.

Group 5: Maximum PEQ >= 100 percent of the maximum PEL or average PEQ >= 100 percent of the average PEL, or either the average or maximum PEQ is between 75 and 100 percent of the PEL and certain conditions that increase the risk to the environment are present. Limit recommended.

Limits to Protect Numeric Water Quality Criteria

		Recommended Effluent Limits	
Parameter	***Units***	***Average***	***Maximum***
Ammonia (Summer)	mg/L	1.6	10.7
Ammonia (Winter)	mg/L	6.3	11.4
Residue, Total Filterable	mg/L	1563	--

PEL = preliminary effluent limit
PEQ = projected effluent quality
TR = total recoverable
WLA = wasteload allocation
WQS = water quality standard

Table 9. Final Effluent Limits for Outfall 3IN00398001 and Station 3IN00398601

Parameter	Units	Concentration		Loading (kg/day)[a]		Basis[b]
		30 Day Average	Daily Maximum	30 Day Average	Daily Maximum	
Outfall 001						
Water Temperature						
January	°F	47	52	--	--	WQS
February	°F	47	52	--	--	WQS
March	°F	52	57	--	--	WQS
April	°F	62	67	--	--	WQS
May	°F	68	74	--	--	WQS
June	°F	78	82	--	--	WQS
July	°F	82	85	--	--	WQS
August	°F	82	85	--	--	WQS
September	°F	77	81	--	--	WQS
October	°F	68	73	--	--	WQS
November	°F	60	65	--	--	WQS
December	°F	47	52	--	--	WQS
Flow Rate	MGD	- - - - - - - - - - - - Monitor - - - - - - - - - - - -				M[c]
Ammonia-N (Summer)	mg/L	1.6	10.7	3.8	25.1	WLA
Ammonia-N (Winter)	mg/L	6.1	11.4	14.3	26.8	WLA/ABS
Chlorine, Total Residual	mg/L	--	0.019	--	--	WLA/OMZM
Oil & Grease	mg/L	--	10	--	--	WQS
Residue, Total Filterable	mg/L	1533	--	3597	--	WLA/ABS
Phosphorus, Total	mg/L	- - - - - - - - - - - - Monitor - - - - - - - - - - - -				M[c]
Chromium	µg/L	- - - - - - - - - - - - Monitor - - - - - - - - - - - -				M[c]
Copper	µg/L	- - - - - - - - - - - - Monitor - - - - - - - - - - - -				M[c]
Zinc	µg/L	- - - - - - - - - - - - Monitor - - - - - - - - - - - -				M[c]
Mercury	ng/L	- - - - - - - - - - - - Monitor - - - - - - - - - - - -				M[c]
Acute Toxicity	TUa	--	1.0	--	--	BTJ
pH, Maximum (i.e. 9.0 S.U.)	S.U.	- - - - - - - - - - - - Monitor - - - - - - - - - - - -				BTJ/WQS
pH, Minimum (i.e. 6.5 S.U.)	S.U.	- - - - - - - - - - - - Monitor - - - - - - - - - - - -				BTJ/WQS
pH Range Excursion, Maximum Duration	Minutes	--	60	--	--	CFR
pH Range Excursions, > 60 Minutes	No./Day	--	0	--	--	CFR
pH Range Excursion, Monthly Total Duration	Minutes	--	446	--	--	CFR
Internal Monitoring Station 601						
pH	S.U.	6.0 - 9.0		--	--	NSPS
Total Suspended Solids	mg/L	30	100	--	--	NSPS
Oil & Grease	mg/L	15	20	--	--	NSPS

Parameter	Units	Concentration		Loading (kg/day)[a]		Basis[b]
		30 Day Average	Daily Maximum	30 Day Average	Daily Maximum	
Flow Rate	MGD	- - - - - - - - - - - - Monitor - - - - - - - - - - - -				M[c]

[a] Effluent loadings based on flow of 0.62 MGD.

[b] Definitions:

ABS = Antibacksliding Rule (OAC 3745-33-05(F) and 40 CFR Part 122.44(l))
BTJ = Best Technical Judgment
CFR = Code of Federal Regulations, 40 CFR 401.17
M = BEJ of Permit Guidance 2: Determination of Sampling Frequency Formula for Industrial Waste Discharges
NSPS = New Source Performance Standards, 40 CFR 423 Steam Electric Power Category, Cooling Tower Blowdown and Low Volume Wastewater Dischargers.
RP = Reasonable Potential for requiring water quality-based effluent limits and monitoring requirements in permits (OAC 3745-33-07(A))
WLA = Wasteload Allocation procedures (OAC 3745-2)
WLA/OMZM = Wasteload Allocation limited by Outside Mixing Zone Maximum
WQS = Ohio Water Quality Standards (OAC 3745-1)

[c] Monitoring of flow and other indicator parameters is specified to assist in the evaluation of effluent quality and treatment plant performance.

Attachment 1. Applicable Federal Effluent Limitation Guidelines

40 CFR 423.15 - New Source Performance Standards		
Parameter (mg/L)	Daily Maximum	30-Day Average
Low Volume Wastes		
TSS	100.0	30.0
Oil and Grease	20.0	15.0
pH	6.0 to 9.0	-
Cooling Tower Blowdown		
Chlorine, Free Available	0.5*	0.2*
Chromium, Total	0.2	0.2
Zinc, Total	1.0	1.0
Other Priority Pollutants	**	**

* - Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or state, if the state has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level of chlorination.

** - There shall be no detectable amount of other priority pollutants contained in chemicals added for cooling tower maintenance.

Attachment 2: Mud Creek Temperature Criteria (OAC 3745-1-35, Table 35-11(A))

Month (days)	**°F**	**°F**
January	47	52
February	47	52
March (1-15)	51	56
March (16-31)	54	59
April (1-15)	59	65
April (16-30)	65	70
May (1-15)	67	73
May (16-31)	70	76
June (1-15)	74	80
June (16-30)	82	85
July	82	85
August	82	85
September (1-15)	82	85
September (16-30)	73	78
October (1-15)	71	76
October (16-31)	65	70
November	60	65
December	47	52

Attachment 3. List of Approved Boiler/Cooling Water System Additives

Ammonium Hydroxide
Sodium Hypochlorite
Sodium Hydroxide
Sodium Bisulfite
Sulfuric Acid
Polyacrylic Acid
ChemTreat CL-4435
Steamate NA0760

Addendum 1. Acronyms

ABS	Anti-backsliding
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BPJ	Best professional judgment
BPT	Best Practicable Control Technology Currently Available
BTJ	Best technical judgment
CFR	Code of Federal Regulations
CONSWLA	Conservative substance wasteload allocation
CWA	Clean Water Act
CWIS	Cooling water intake structure
DMR	Discharge Monitoring Report
DMT	Dissolved metal translator
ELG	Federal effluent limitation guideline
gpm	Gallons per minute
IMZM	Inside mixing zone maximum
MDL	Analytical method detection limit
MGD	Million gallons per day
NPDES	National Pollutant Discharge Elimination System
NSPS	New source performance standards
OAC	Ohio Administrative Code
Ohio EPA	Ohio Environmental Protection Agency
ORC	Ohio Revised Code
ORSANCO	Ohio River Valley Water Sanitation Commission
PEL	Preliminary effluent limit
PEQ	Projected effluent quality
PMP	Pollution Minimization Program
PPE	Plant performance evaluation
SIC	Standard Industrial Classification
TBEL	Technology-based effluent limit
TMDL	Total Daily Maximum Load
TRE	Toxicity reduction evaluation
TU	Toxicity unit
U.S. EPA	United States Environmental Protection Agency
WET	Whole effluent toxicity
WLA	Wasteload allocation
WQBEL	Water-quality-based effluent limit
WQS	Water Quality Standards