National Pollutant Discharge Elimination System (NPDES) Permit Program

F A C T S H E E T

Regarding an NPDES Permit To Discharge to Waters of the State of Ohio
for **Ashtabula Energy, LLC**

Public Notice No.: 15-02-026
Public Notice Date: February 5, 2015
Comment Period Ends: March 27, 2015

OEPA Permit No.: **3IN00387*AD**
Application No.: **OH0147150**

Name and Address of Applicant:

Ashtabula Energy, LLC
2603 Augusta Drive, Suite 1175
Houston, Texas 77057

Name and Address of Facility Where Discharge Occurs:

Ashtabula Energy, LLC
State Route 531
Ashtabula, OH 44004
Ashtabula County

Receiving Water: **Lake Erie**

Subsequent
Stream Network: N/A

Introduction

Development of a Fact Sheet for NPDES permits is required by Title 40 of the Code of Federal Regulations, 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, 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 and other treatment-technology based standards, existing effluent quality, instream biological, chemical and physical conditions, and the allocations of pollutants to meet Ohio Water Quality Standards. This Fact Sheet details the discretionary decision-making process empowered to the director by the Clean Water Act and Ohio Water Pollution Control Law (ORC 6111). Decisions to award variances to Water Quality Standards or promulgated effluent guidelines for economic or technological reasons will also be justified in the Fact Sheet where necessary.

In accordance with the antidegradation rule, OAC 3745-1-05, it has been determined that a lowering of water quality in Lake Erie is necessary. Provision (D)(1)(b)(iii) & (h) were applied to this application. This provision excludes the need for the submittal and subsequent review of technical alternatives and social and economic issues related to the degradation. Other rule provisions, however, including public participation and appropriate intergovernmental coordination were required and considered prior to reaching this decision.

Effluent limits based on available treatment technologies are required by Section 301(b) of the Clean Water Act. Many of these have already been established by 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 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 wasteload allocation for a pollutant to a measure of the effluent quality. The measure of effluent quality is called PEQ - Projected Effluent Quality. 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 seven new outfall stations:

- 3IN00387001: This station discharges combined effluent prior to discharge to Lake Erie. In addition to monitoring requirements, this station contains limits for dissolved oxygen, pH, oil and grease and chlorine based on water quality standards. This station contains a limit for phosphorus based on Phosphorus Treatment Standards, and limits for whole effluent toxicity.
- 3IN00387601: This station discharges non-contact cooling water, boiler blowdown, fire system water, water treatment residuals, process storm water and miscellaneous non-process wastewater to outfall 001. It contains monitoring requirements only.
- 3IN00387602: This station discharges process wastewater and process storm water to outfall 001. In addition to monitoring requirements, this station contains limits for biochemical oxygen demand, pH, and total suspended solids.
- 3IN00387603: This station discharges treated sanitary wastewater to station 001. In addition to monitoring requirements, it contains limits for dissolved oxygen, pH, TSS, ammonia, E, coli, chlorine, and biochemical oxygen demand.
- 3IN00387586: This station is for sludge that is hauled to a landfill. It contains monitoring of the sludge weight removed from the facility.
- 3IN00387801: This station monitors the intake water. It contains monitoring only.
- 3IN00387901: This station monitors Lake Erie. It contains monitoring only.

In addition to the new outfall stations, the draft permit contains a compliance schedule requiring the submittal of a permit to install application and detailed plans for the construction of process and sanitary wastewater treatment systems.

Several conditions have been included in Part II of the permit including requirements for operator certification, limits below quantification, outfall signage, storm water, whole effluent toxicity testing, priority pollutant monitoring, and a facility wide mercury evaluation.

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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 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 addressed 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 in person 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 Allison Cycyk from the Northeast District Office at (330) 963-1132, Allison.cycyk@epa.ohio.gov or Ashley Ward from Central Office at (614) 644-4852, Ashley.ward@epa.ohio.gov.

Information Regarding Certain Water Quality Based Effluent Limits

This draft permit may contain proposed WQBELs for parameters that **are not** priority pollutants. (See the following link for a list of the priority pollutants: http://epa.ohio.gov/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 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, written notification 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 3745-1-35. 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

Ashtabula Energy would discharge to an existing box culvert which flows to Lake Erie. The approximate location of the facility is shown in Figure 1. A diagram of the First Energy Discharge Channel is shown in Figure 2.

This section of Lake Erie is described by Ohio EPA River Code: 24-800, County: Ashtabula, Ecoregion: Eastern Corn Belt Plains. Lake Erie is designated for the following uses under Ohio's WQS (Ohio Administrative Code [OAC] 3745-1-31): Exceptional Warmwater Habitat (EWH), Agricultural Water Supply (AWS), Industrial Water Supply (IWS), Public Water Supply (PWS), and Bathing Water (BW). Lake Erie is also classified as a Superior High Quality Water (SHQW) under Ohio's antidegradation rule.

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 water quality standards 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 Clean Water Act. Ohio WQS also include aquatic life use designations for waterbodies which cannot meet the Clean Water Act 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) and wading only (Secondary Contact - 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 and industrial water supply.

Facility Description

The proposed Ashtabula Energy facility would convert natural gas and oxygen through the Fischer-Tropsch process with a catalyst system to produce up to 5,000 barrels of diesel fuel per day and by-product waxes. Liquid fuels would be transferred to a tank farm consisting of above-ground storage tanks.

Based on the application, incoming lake water would be treated as necessary for use in the recycled non-contact cooling water system, for boiler operations and for process operations. Anticipated treatment includes screening and clarification, with reverse osmosis treatment prior to use in the boiler system.

Solids would go through pressure filtration then would be disposed of in a landfill.

The company has declared that the process operations performed at this facility are classified by the Standard Industrial Classification (SIC) codes 2865, "Cyclic Organics Crudes and Intermediates, and Organic Dyes and Pigments". Discharges resulting from process operations do not appear to be covered directly by any established Federal Effluent Guideline regulations.

Description of Proposed Discharge

The draft permit contains one final outfall that discharges to the First Energy Ashtabula Plant discharge channel that flows into Lake Erie. Outfall 001 would contain all of the plant discharges and would be treated by settling before being discharged. Dry weather flow at this outfall is estimated to be 1.627 MGD. Outfall 001 would be a combination of the following discharges: non-contact cooling water; boiler blowdown; water treatment plant residuals; storm water; process wastewaters treated biologically; and sanitary wastewater treated biologically. The sources of wastewater and treatment systems for outfall 001 are shown in Attachment 1. The permittee is planning to on implementing the following treatment processes at this outfall station:

- Settling

Outfall 601 would contain boiler blowdown, non-contact cooling water, fire system water, water treatment plant residuals, miscellaneous non-process wastewater, and process storm water. Average flow through outfall 601 is estimated to be 1.4 MGD, which would make up approximately 85% of the total volume discharged through outfall 001. Incoming lake water would be treated by clarification for cooling purposes; boiler water would also be processed through a reverse osmosis unit.

Outfall 602 would contain industrial process wastewater, process area storm water, and non-process wastewaters. Average flow through outfall 602 is estimated to be 0.225 MGD. The manufacturing process would generate two wastewater streams, a hot separator stream and a cold separator stream. The combined wastewater will go through a steam stripper. The stripper overheads would contain the majority of the alcohols and organic compounds and the stripper bottoms would contain process water to be discharged. The wastewater would then combine with process storm water to be treated in a biological wastewater unit. Oil removal may be a part of this treatment system if OEPA's Permit-to-Install review finds such treatment necessary. The permit application indicates that the permittee is planning on implementing the following treatment processes at this outfall station:

- Screening
- Flow Equalization
- Mixing
- Sedimentation
- Activated sludge

Outfall 603 would contain discharge from the sanitary sewage treatment system. Average flow through outfall 603 is estimated to be 0.002 MGD. The permit application indicates that the permittee is planning on implementing the following treatment processes at this outfall station:

- Screening
- Activated sludge
- Sedimentation
- Chlorine disinfection

The draft permit contains monitoring and limits at internal stations 601-603. Effluent limits are applied at outfalls 602 and 603 to ensure that treatment standards are met prior to combining with other waste streams. If monitoring was not done at these locations, it would not be possible to verify compliance with these standards due to dilution. Federal rules [40 CFR 125.3(f)] prohibit attaining treatment standards by dilution.

Table 1 presents predicted chemical concentrations for the waste streams tributary to outfall 001. This information is from the company's NPDES application.

Receiving Water Quality

Recent biological data for Lake Erie is not currently available. However, the *Ohio EPA 2010 Integrated Report* includes results from sampling conducted from 2002 showing that the Lake Erie Central Basin Shoreline is in partial attainment of the aquatic life designated use at 23.5 percent of the monitored sites and non-attainment for 58.8% of the monitored sites. The causes of non-attainment include municipal point sources, combined sewer overflows, and urban runoff. There is also impairment with regard to the recreational designated use. A summary of the causes and sources of impairment for aquatic life use can be viewed at the following web address:

http://wwwapp.epa.ohio.gov/dsw/ir2010/leau002.html.

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 effluent data for Ashtabula Energy 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.

Wasteload Allocation
For those parameters that were given a wasteload allocation (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 Water Quality Standards (WQS - OAC 3745-1). Most pollutants are allocated by a mass-balance method because they do not degrade in the receiving water. WLAs for direct discharges to lakes are done using the following equation for average criteria: WLA = (11 x Water Quality Criteria) – (10 x Background Concentration). Allocations for maximum criteria are set equal to the Inside Mixing Zone Maximum (IMZM) values. Ashtabula Energy would be considered interactive with the following dischargers:

- First Energy Generation
- Cristal USA
- EMC
- Praxair
- USALCO

PEQ values were determined by finding the PEQ for each facility, multiplying them by the flow from the facility, and then dividing the sum by the total flow. Table 2 summarizes the PEQs and flows from all facilities. Table 3 summarizes the final PEQs used in the WLA. Below is an example calculation showing how the final PEQ was determined for average selenium:

[(3.63 µg/L)(1.627 MGD) + (21.89 µg/L)(10 MGD) + (3.349 µg/L)(222 MGD) + (5.431 µg/L)(0.37 MGD) + (3.485 µg/L)(2.68 MGD)]/ 245.3039 MGD
= 3.994 µg/L

The data used in the WLA are listed in Tables 4 and 5. The wasteload allocation results to maintain all applicable criteria are presented in Table 6.

Whole Effluent Toxicity WLA
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 (TU_c) and 7Q10 flow for the average and the acute toxicity unit (TU_a) 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 Ashtabula Energy, the WLA values are 1.0 TU_a and 11.0 TU_c.

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):

$$TU_c = 100/\text{geometric mean of No Observed Effect Concentration and Lowest Observed Effect Concentration}$$

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.

<u>Reasonable Potential/ Effluent Limits/Hazard Management Decisions</u>

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 6. 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 7.

The final effluent limits are determined by evaluating the groupings in conjunction with other applicable rules and regulations. Tables 8, 9, 10, and 11 present the final effluent limits and monitoring requirements proposed for outfalls 001, 601, 602, and 603 and the basis for their recommendation.

Outfall 001

Dissolved Oxygen, Oil and Grease, and pH
Limits proposed for dissolved oxygen, oil and grease, and pH are based on Water Quality Standards (OAC 3745-1).

Chlorine
The proposed limit for total residual chlorine is based on WLA as limited by the IMZM. The IMZM is a value calculated to avoid rapidly lethal conditions in the effluent mixing zone. The effluent limit for chlorine at outfall 001 is less than the quantification level of 0.050 mg/L.

Phosphorus
In 2011, Lake Erie experienced the largest harmful algal bloom ever recorded, consisting mostly of Mycrocystis. In Lake Erie, algal growth is limited by phosphorus, the more phosphorus available; the more algae can grow. Based on best technical judgment a phosphorus limit is proposed. In addition, publically owned treatment works in the Lake Erie Basin are given the same limit based on Phosphorus Treatment Standards (OAC 3745-33-06 (C)).

Water Temperature, Chemical Oxygen Demand, Total Organic Carbon, and Flow Rate
Monitoring for these parameters is proposed in order to evaluate the performance of the treatment plant.

Copper

The Ohio EPA risk assessment (Table 7) places copper in group 5, which recommends limits to protect water quality. Using the discretion allowed by the Director under OAC 3745-33-07(A)(5), monitoring rather than limits is proposed for this parameter. The Ashtabula Energy effluent is projected to have concentrations less than 5.79 µg/L, which is well below the effluent limit necessary to maintain WQS. The purpose of the proposed monitoring is to collect additional data on the frequency of occurrence and variability of these pollutants in the effluent.

Antimony, Boron, Cobalt, Molybdenum, Phenol, Selenium, Total Filterable Residue, and Zinc
The Ohio EPA risk assessment (Table 7) places antimony, boron, cobalt, molybdenum, phenol, selenium, total filterable residue, and zinc in groups 2 and 3. This placement, as well as the data in Tables 1, 2, and 3 support that these parameters do not have the reasonable potential to contribute to WQS exceedances, and limits are not necessary to protect water quality. Monitoring is proposed to document that these pollutants are present at levels below WQS.

Total Suspended Solids, Mercury, Ammonia, Sulfate, Total Kjeldahl Nitrogen, Nitrite plus Nitrate, Cadmium, Nickel, Tin, Lead, Chromium, Bis(2-ethylhexyl)phthalate, Free Cyanide and $CBOD_5$
Monitoring is proposed for these parameters to characterize the effluent and to document that they are present at levels below WQS.

Whole Effluent Toxicity
The draft NPDES permit contains a maximum toxicity limit of 1.0 TU_a. This limit is based on the WLA and is included to control toxicity from the discharge as a whole. Cooling towers and materials refining discharges can contain toxic concentrations of total filterable residue (TFR) (salts) if not managed carefully. The macroinvertebrates that form a significant part of fish diets are particularly susceptible to TFR-related toxicity. As Ohio has no maximum standard for TFR, acute toxicity limits are needed to ensure that the no-rapid-lethality narrative WQS is met.

Outfall 601

Water Temperature, pH, and Flow Rate
Based on best technical judgment, monitoring is proposed for water temperature, pH, and flow rate at outfall 601 to characterize the effluent.

Copper, Mercury, and Total Filterable Residue
Monitoring is proposed for copper, mercury, and total filterable residue at outfall 601. The non-contact cooling water is proposed to be recycled, which will concentrate these parameters.

Chlorine and Total Residual Oxidants
Monitoring is proposed for chlorine and total residual oxidants. Chlorine and bromine are commonly present in non-contact cooling water due to cooling water additives that are used as biocides.

Ammonia, Total Organic Carbon, and TSS
Monitoring is proposed for ammonia, total organic carbon, and total suspended solids. These parameters are projected to be present in the effluent in low quantities and the purpose of the monitoring is to document that these parameters are present in low quantities. TSS is expected to be present in storm water. Total organic carbon will act as an indicator of potentially toxic organic chemicals being present at this outfall.

Outfall 602

There are no federal effluent guidelines (FEG) applicable to the proposed discharge from Ashtabula Energy. Per OAC 3745-1-05(A)(3)(e) "effluent limitations will be developed based upon best professional judgment." Ohio EPA determined that the Organic Chemical, Plastics and Synthetic Fibers

(OCPSF) category, found in 40 CFR 414 is the closest approximation to the proposed facility.

BOD and TSS
The antidegradation application was found to be exempt from the submittal and review requirements of OAC 3745-1-05(B)(3)(e) to (h) and (C)(5) because the discharge will be *de minimis* and the discharge will not exceed 65 mg/L TSS or 10 mg/L oil and grease. The limits included in the draft permit for TSS and BOD were proposed by the applicant, and will ensure the conditions of the exclusion are met. In addition, these limits are more stringent than the average of the limits found in 40 CFR 414 for OCPSF New Source Performance Standards (NSPS).

pH
Limits for pH are based on the FEG found in 40 CFR 414.

Water Temperature, Oil and Grease, Dissolved Oxygen, Chemical Oxygen Demand, Total Organic Carbon, Flow Rate, Ammonia, TKN, Nitrite plus Nitrate, Phosphorus, Boron, Antimony, Cobalt, Selenium, Total Phenolics, Mercury and Total Filterable Residue
Monitoring for these parameters is proposed to characterize the effluent and is based on best technical judgment.

Metals and Organics
Monitoring is proposed for additional metals and organics based on best technical judgment. These monitoring requirements were derived from the list of parameters found in 40 CFR 414 Subpart I – Direct Discharge Point Sources That Use End-of-Pipe Biological Treatment. Ohio EPA did not include monitoring for parameters found in 40 CFR 414 Subpart I that would not be present at the facility.

Outfall 603

Flow Rate and Turbidity
Monitoring is proposed for flow rate and turbidity to characterize the effluent and is based on best technical judgment.

Dissolved Oxygen, pH, TSS, BOD, Ammonia, E. coli, and Chlorine
Limits are proposed for these parameters based on best available demonstrated control technology.

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. The proposed permit includes intake and downstream monitoring requirements.

Outfall 801

Outfall 801 has been included in the permit to monitor the intake water. Monitoring is proposed for water temperature, copper, flow rate and mercury. Monitoring is included for copper because Ohio EPA is concerned about copper concentrating during the recycling process. Monitoring is necessary for mercury for the mercury evaluation, which is required by Part II, Item U of the draft permit.

Outfall 901

Outfall 901 has been included in the permit to monitor the water quality in Lake Erie after the Ashtabula Energy discharge. Monitoring is included for hardness, selenium, copper, chlorine and total filterable

residue. Hardness data will be used when Ohio EPA does the modeling next permit cycle. Monitoring for selenium, copper, chlorine and total filterable residue will document that Lake Erie is meeting WQS.

Sludge
Limits and monitoring requirements proposed for the disposal of sewage sludge by the following management practices are based on OAC 3745-40: removal to sanitary.

Other Requirements

Compliance Schedule
The draft permit contains a compliance schedule requiring the submittal of an application for a permit to install (PTI) and detailed plans for the sanitary and process wastewater treatment facilities.

Operator Certification and Operator of Record
Operator certification requirements have been included in Part II of the permit in accordance with rules adopted in December 2006 (OAC 3745-7-02). These rules require the Ashtabula Energy to have a Class A wastewater treatment plant operator in charge of the sewage treatment plant operations discharging through outfall 603. These rules also require the permittee to designate one or more operator of record to oversee the technical operation of the treatment works.

Storm Water Compliance
To comply with industrial storm water regulations, the permittee submitted a form for "No Exposure Certification" which was signed on December 4, 2014. No later than December 4, 2018, the permittee must submit a new form for "No Exposure Certification" or make other provisions to comply with the industrial storm water regulations.

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

Priority Pollutant Monitoring
Part II of the permit includes semi-annual monitoring of priority pollutants.

Mercury Evaluation
Part II of the permit includes a requirement for a facility-wide mercury evaluation to ensure the new discharge is protective of Ohio's WQS.

Cooling Water Intake Structure
Under Section 316(b) of the federal CWA, cooling water intake structures (CWISs) are required to use best technology available (BTA) to minimize adverse environmental impact resulting from the operation of the intake. OEPA has assessed whether this facility is subject to Section 316(b) and has determined that it is exempt for the following reasons:

a) The facility does not meet the definition of a new facility at 40 CFR 125.83 as it does not propose to use a new or expanded existing intake structure to withdraw cooling water and is not subject to the 316(b) New Facility rule. The facility also does not meet the definition of an existing facility as defined at 40 CFR 125.92 as it will commence construction after Jan 17, 2002. Any 316(b) determination would be made on a best professional judgment basis consistent with 40 CFR 125.90(b).

b) The permittee will initially purchase and exclusively use treated process wastewater effluent from Praxair, Inc, an NPDES permit holder for cooling water purposes. U.S. EPA has defined cooling water to exclude process water that is reused for cooling purposes.

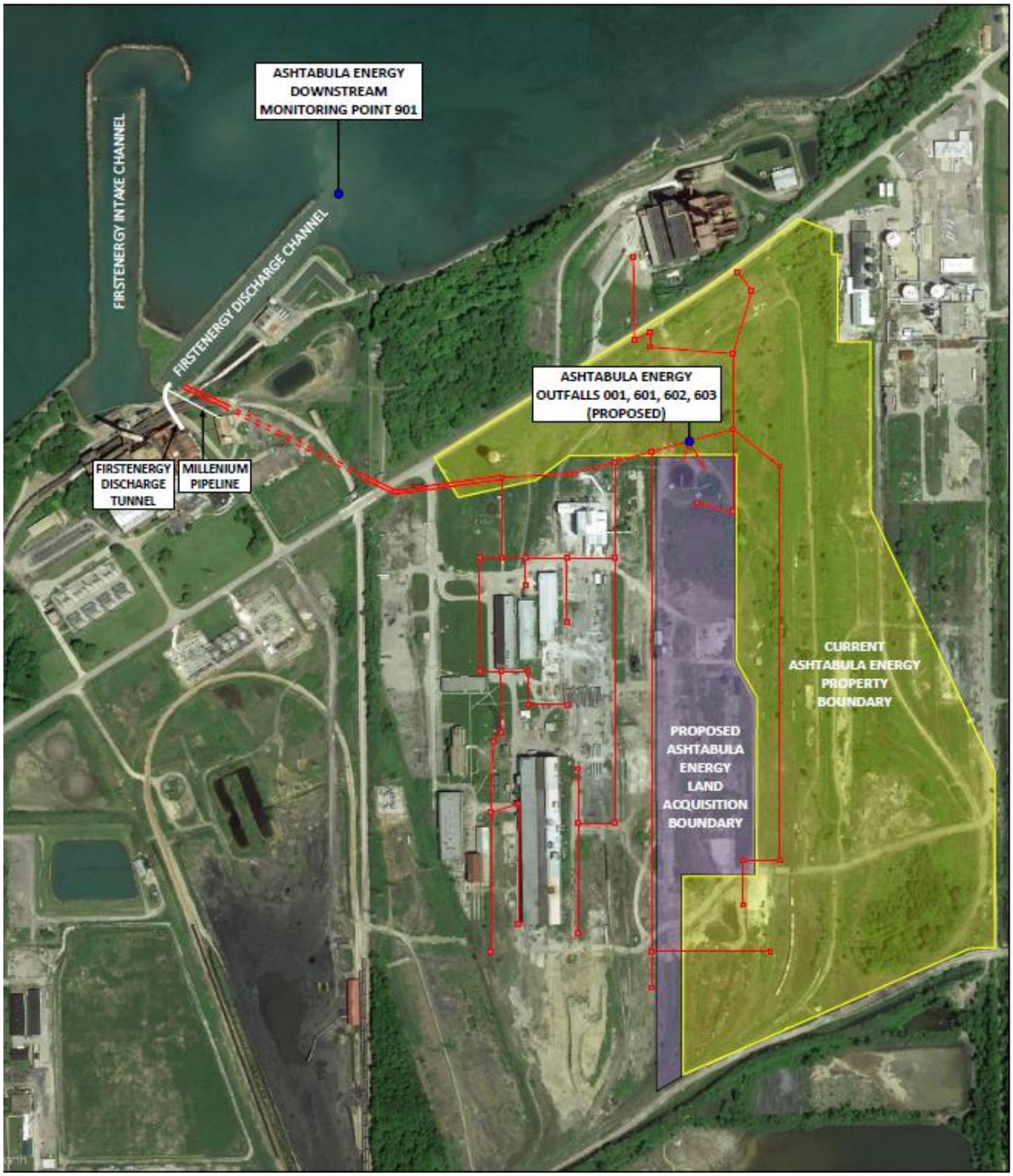
As the facility does not operate a cooling water intake structure nor obtain cooling water as defined by U.S. EPA from a third party supplier, OEPA has determined that the facility is not currently subject to Section 316(b).

The permittee must notify OEPA 90 days prior to obtaining or using any other source of cooling water than treated process wastewater effluent from Praxair, Inc. OEPA must approve the change in cooling water suppliers and the permit shall be modified to incorporate any applicable Section 316(b) requirements regarding the new cooling water source.

Part II, Item W of the permit has more details.

The permittee, in accepting treated process wastewater effluent from another facility, is still responsible for meeting its own effluent limits; no intake credit will be given for the treated process wastewater effluent.

Figure 1. Approximate location of Ashtabula Energy.



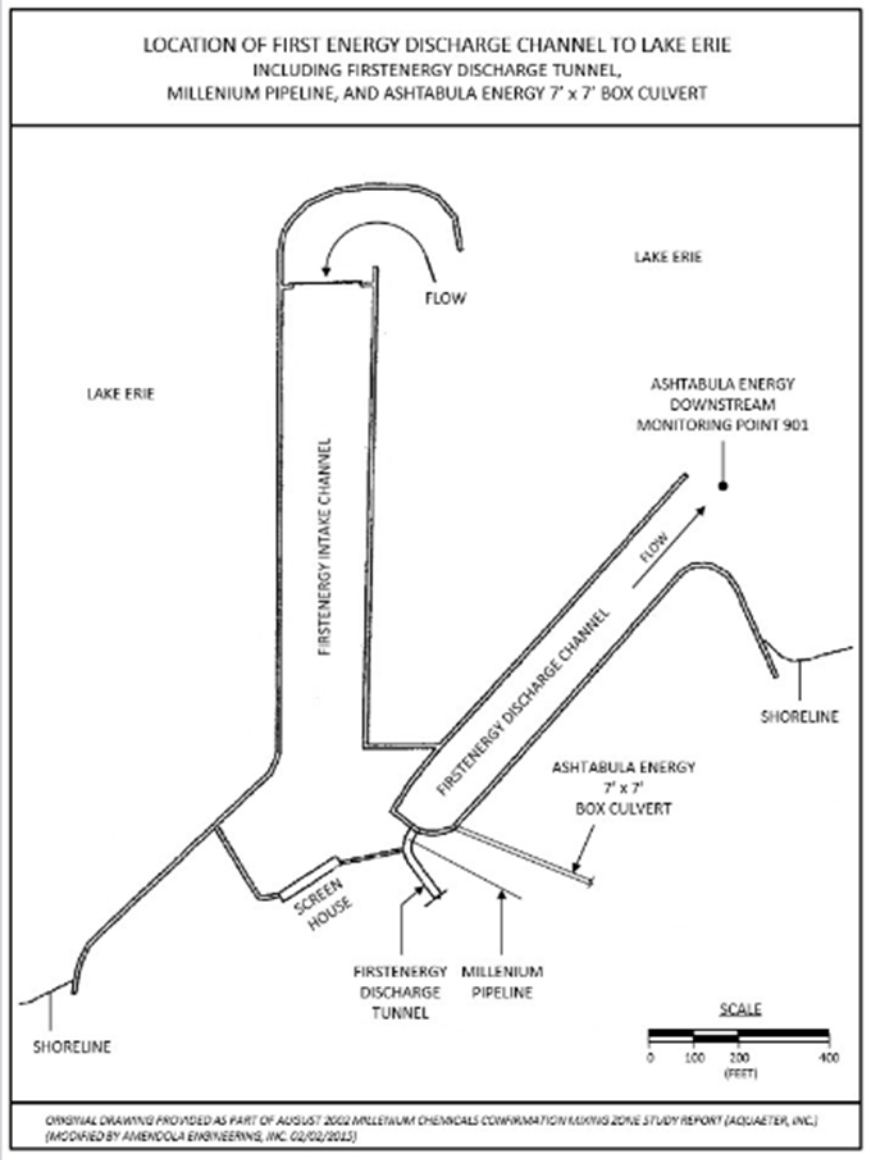


Figure 2. Diagram of the First Energy Discharge Channel.

Table 1. Summary of the Projected Effluent Quality of Ashtabula Energy.
All values are in µg/L unless otherwise indicated. All data from application form 2D; NR = not reported.

Parameter	Final outfall	NCCW, Boiler, RO	Biological Treatment	Sanitary
BOD, mg/L	< 3.51	0	25.2	< 15
COD, mg/L	< 7.1	0	51.1	< 25
TOC, mg/L	< 3.15	2.1	9.63	< 11
TSS, mg/L	< 14.3	11	< 35.0	< 18
Ammonia-N, mg/L	< 0.376	0.19	1.50	< 1.5, <4.5 [a]
Sulfate (as SO_4), mg/L	72.4	84	0.485	28
Total Residue, Filterable (TDS), mg/L	NR	420	140	140
Boron	8.08	NR	11.8	NR
Cobalt	9.25	NR	66.9	NR
Molybdenum	6.51	6.60	5.98	2.2
Tin	< 0.67	NR	< 4.85	NR
Antimony	7.43	8.10	3.28	2.70
Chromium	< 0.086	NR	< 0.625	NR
Copper	< 5.79	< 6.6	< 0.750	2.2
Lead	< 0.02	NR	< 1.48	NR
Selenium	3.63	NR	26.3	NR
Zinc	2.60	NR	18.8	NR
Phenols, total	0.28	NR	2.03	NR
Phenol	0.006	NR	0.042	NR
Bis(2-ethylhexyl)phthalate	< 0.259	NR	< 1.88	NR

[a] Summer and winter

Table 2. Summary of Projected Effluent Quality and Flows for Interactive Facilities.

	Interactive Facility Outfalls.									
PEQs	**Ashtabula Energy**	**Praxair**	**EMC 001**	**EMC 002**	**USALCO 001**	**USALCO 002**	**Millenium**	**First Energy 001**	**First Energy 002**	**First Energy 006**
Flow (MGD)	1.627	8	0.437	0.03	0.153	0.00694	10	222	0.37	2.68
TFR (mg/L) avg	380.9	166	554.2	166[a]	166[a]	166[a]	16015	166[a]	166[a]	166[a]
TFR (mg/L) max	380.9	166	759.2	166[a]	166[a]	166[a]	19261	166[a]	166[a]	166[a]
Boron (µg/L) avg	8.08	ND	ND	ND	ND	ND	307.9	224.9	1267	141.2
Boron (µg/L) max	8.08	ND	ND	ND	ND	ND	421.8	308.1	1736	193.4
Cobalt (µg/L) avg	9.25	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt (µg/L) max	9.25	ND	ND	ND	ND	ND	ND	ND	ND	ND
Molybdenum (µg/L) avg	6.51	ND	ND	ND	ND	ND	33.29	0.009505	0.02851	0.007694
Molybdenum (µg/L) max	6.51	ND	ND	ND	ND	ND	45.6	0.01302	0.03906	0.01054
Antimony (µg/L) avg	7.43	ND	ND	ND	ND	ND	ND	0.01494	0.03395	ND
Antimony (µg/L) max	7.43	ND	ND	ND	ND	ND	ND	0.02046	0.0465	ND
Selenium (µg/L) avg	3.63	ND	ND	ND	ND	ND	21.89	3.349	5.431	3.485
Selenium (µg/L) max	3.63	ND	ND	ND	ND	ND	34.44	4.588	7.44	4.774
Zinc (µg/L) avg	2.6	15[a]	38.757	15[a]	15[a]	15[a]	81.8	0.006336	15[a]	15.03
Zinc (µg/L) max	2.6	15[a]	50.913	15[a]	15[a]	15[a]	113.6	0.00868	15[a]	167
Phenols, Total (µg/L) avg	0.28	ND	3.723	ND	ND	ND	ND	6.961	ND	ND
Phenols, Total (µg/L) max	0.28	ND	5.1	ND	ND	ND	ND	9.536	ND	ND
Phenol (µg/L) avg	0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol (µg/L) max	0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sulfate (mg/L) avg	72.4	ND	ND	ND	ND	ND	905.2	101.8	1177	103.6
Sulfate (mg/L) max	72.4	ND	ND	ND	ND	ND	1240	139.5	1612	142
Copper (mg/L) avg	2.895	5[a]	5[a]	5[a]	5[a]	5[a]	12	43.062	13.99	15.068
Copper (mg/L) max	2.895	5[a]	5[a]	5[a]	5[a]	5[a]	19	56.45	19.17	22.817

[a] When no facility data was available, but background water quality data was available, background water quality data was used.

Definitions
ND Not determined;
PEQ Projected effluent quality;
TFR Total filterable residue.

Table 3. Final Projected Effluent Quality (PEQ).

Parameter	PEQ Average	PEQ Maximum
Total Filterable Residue (mg/L)	814.213	946.9
Boron (µg/L)	219.594	300.810
Cobalt (µg/L)	0.06135	0.06135
Molybdenum (µg/L)	1.409	1.914
Antimony (µg/L)	0.0629	0.0679
Selenium (µg/L)	3.994	5.644
Zinc (µg/L)	4.114	7.095
Phenols, Total (µg/L)	6.308	8.641
Phenol (µg/L)	0.0000398	0.0000398
Sulfate (mg/L)	132.417	181.26
Copper (µg/L)	39.841	52.159

Table 4. Instream Conditions and Discharger Flow

Parameter	Units	Season	Value	Basis
Hardness	mg/L	annual	140	STORET
pH	S.U.	summer	0	
		winter	0	
Temperature	°C	summer	0	
		winter	0	
Ashtabula Energy flow	cfs	annual	379.015	Sum of flows into channel
Background Water Quality				
Antimony	µg/L		0	No representative data available.
Boron	µg/L		0	No representative data available.
Cobalt	µg/L		0	No representative data available.
Dissolved solids	mg/L		166	OEPA data; 30 values, 0<MDL
Molybdenum	µg/L		0	No representative data available.
Phenol	µg/L		0	No representative data available.
Phenolics	µg/L		0	No representative data available.
Selenium	µg/L		0	No representative data available.
Sulfates	mg/L		0	No representative data available.
Zinc	µg/L		15	BWQR; 2284 values, 1117<MDL
Copper	µg/L		5	BWQR; 2867 values, 1597<MDL

Definitions BWQR = *Analysis of Unimpacted Stream Data for the State of Ohio*, 1988;
cfs = cubic feet per second;
MDL = method detection limit;
STORET =USEPA water quality Storage and Retrieval Database.

Table 5: Water Quality Criteria in Study Area.

Parameter	Units	Outside Mixing Zone Criteria					Inside Mixing Zone Maximum
		Average				Maximum	
		Wildlife	Human Health	Agri-culture	Aquatic Life	Aquatic Life	
Antimony	µg/L	--	780	--	190	900	1800
Boron	µg/L	--	200000	--	3900	33000	65000
Cobalt	µg/L	--	--	--	24	220	440
Dissolved solids	mg/L	--	--	--	1500	--	--
Molybdenum	µg/L	--	10000	--	20000	190000	370000
Phenol	µg/L	--	2400	--	400	4700	9400
Phenolics	µg/L	--	--	--	--	--	--
Selenium	µg/L	--	3100	50	5	--	--
Sulfates	mg/L	--	--	--	--	--	--
Zinc	µg/L	--	35000	25000	160	160	320
Copper	µg/L	--	64000	500	12	19	38

Table 6. Summary of Effluent Limits to Maintain Applicable WQ Criteria.

		Outside Mixing Zone Criteria					Inside
		Average				Maximum	Mixing
Parameter	**Units**	**Wildlife**	**Human Health**	**Agri-culture**	**Aquatic Life**	**Aquatic Life**	**Zone Maximum**
Antimony	µg/L	--	8580	--	2090	--	1800
Boron	µg/L	--	2200000	--	42900	--	65000
Cobalt	µg/L	--	--	--	264	--	440
Dissolved solids	mg/L	--	--	--	14840	--	--
Molybdenum	µg/L	--	110000	--	220000	--	370000
Phenol	µg/L	--	26400	--	4400	--	9400
Phenolics	µg/L	--	--	--	--	--	--
Selenium	µg/L	--	34100	550	55	--	--
Sulfates	mg/L	--	--	--	--	--	--
Zinc	µg/L	--	384850	274850	1610	--	320
Copper	µg/L	--	703950	5450	82	--	38

Table 7. Parameter Assessment.

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

Phenolics	Sulfates

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

Antimony	Boron	Cobalt
Molybdenum	Phenol	Zinc

Group 3: PEQ_{max} < 50 percent of maximum PEL and PEQ_{avg} < 50 percent of average PEL. No limit recommended; monitoring optional.

Dissolved solids	Selenium

Group 4: PEQ_{max} >= 50 percent, but < 100 percent of the maximum PEL or PEQ_{avg} >= 50 percent, but < 100 percent of the average PEL. Monitoring is appropriate.

No Group 4 parameters.

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
Copper	µg/L	--	38

Table 8. Final Effluent Limits and Monitoring Requirements for Ashtabula Energy, LLC Outfall 3IN00387001 and the Basis for their Recommendation.

		Concentration		Loading (kg/day)[a]		
Parameter	**Units**	**30 Day Average**	**Daily Maximum**	**30 Day Average**	**Daily Maximum**	**Basis[b]**
Water Temperature	°C	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Flow Rate	MGD	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
pH	SU	6.5 - 9.0		--	--	WQS
Dissolved Oxygen	mg/L	Minimum 5.0				WQS
Chemical Oxygen Demand	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Total Suspended Solids	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Oil & Grease	mg/L	Maximum 10				WQS
Ammonia						
Summer	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Winter	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Total Kjeldahl Nitrogen	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Nitrate+Nitrite	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Phosphorus	mg/L	1.0	--	--	--	BTJ
Total Filterable Residue	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Total Organic Carbon	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Free Cyanide	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Sulfate	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Nickel	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Tin	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Boron	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Zinc	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Cadmium	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Lead	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Chromium	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Copper	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				WLA
Cobalt	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Selenium	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Molybdenum	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Antimony	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Mercury	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Phenol	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Bis(2-ethylhexyl) Phthalate	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Carbonaceous Biochemical Oxygen Demand (5 day)	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ

Parameter	Units	Concentration 30 Day Average	Concentration Daily Maximum	Loading (kg/day)[a] 30 Day Average	Loading (kg/day)[a] Daily Maximum	Basis[b]
Chlorine, Total Residual	mg/L	--	0.038	--	--	WQS
Acute Toxicity						
Ceriodaphnia dubia	TU_a	1.0		--	--	BTJ
Pimephales promelas	TU_a	1.0		--	--	BTJ

[a] Projected average dry weather flow = 1.627 MGD.

[b] Definitions:

BTJ = Best Technical Judgment

WLA = Wasteload Allocation
WQS = Ohio Water Quality Standards (OAC 3745-1)

Table 9. Final Effluent Limits and Monitoring Requirements for Ashtabula Energy, LLC Outfall 3IN00387601 and the Basis for Their Recommendation.

		Concentration		Loading (kg/day)[a]		
Parameter	**Units**	**30 Day Average**	**Daily Maximum**	**30 Day Average**	**Daily Maximum**	**Basis[b]**
Water Temperature	°C	- - - - - - - - - - -	Monitor	- - - - - - - - - - - -		BTJ
Flow Rate	MGD	- - - - - - - - - - -	Monitor	- - - - - - - - - - - -		BTJ
pH	SU	- - - - - - - - - - -	Monitor	- - - - - - - - - - - -		BTJ
Total Suspended Solids	mg/L	- - - - - - - - - - -	Monitor	- - - - - - - - - - - -		BTJ
Ammonia	mg/L	- - - - - - - - - - -	Monitor	- - - - - - - - - - - -		BTJ
Total Organic Carbon	mg/L	- - - - - - - - - - -	Monitor	- - - - - - - - - - - -		BTJ
Total Filterable Residue	mg/L	- - - - - - - - - - -	Monitor	- - - - - - - - - - - -		BTJ
Copper	µg/L	- - - - - - - - - - -	Monitor	- - - - - - - - - - - -		BTJ
Mercury	mg/L	- - - - - - - - - - -	Monitor	- - - - - - - - - - - -		BTJ
Chlorine, Total Residual	mg/L	- - - - - - - - - - -	Monitor	- - - - - - - - - - - -		BTJ
Total Residual Oxidants	mg/L	- - - - - - - - - - -	Monitor	- - - - - - - - - - - -		BTJ

[a] Projected average flow of 1.4 MGD.

[b] Definitions: **BTJ** = Best Technical Judgment

Table 10. Final Effluent Limits and Monitoring Requirements for Ashtabula Energy, LLC Outfall 3IN00387602 and the Basis for Their Recommendation.

		Concentration		Loading (kg/day)[a]		
Parameter	**Units**	**30 Day Average**	**Daily Maximum**	**30 Day Average**	**Daily Maximum**	**Basis[b]**
Water Temperature	°C	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Chemical Oxygen Demand	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Dissolved Oxygen	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Flow Rate	MGD	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
pH	SU	6.5 - 9.0		--	--	BADCT
Total Suspended Solids	mg/L	30	60	25.6	51.1	BADCT
Oil & Grease	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Ammonia	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Total Kjeldahl Nitrogen	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Nitrate+Nitrite	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Phosphorus	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Total Organic Carbon	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Total Filterable Residue	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Free Cyanide	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Boron	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Nickel	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Zinc	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Lead	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Chromium	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Copper	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Cobalt	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Selenium	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Toluene	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Benzene	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Acrylonitrile	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Diethyl phthalate	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Dimethyl phthalate	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Ethylbenzene	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Nitrobenzene	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
Pyrene	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
2-Nitrophenol	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
2,4-Dimethylphenol	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
2,4-Dinitrotoluene	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
2,4-Dinitrophenol	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ
2,6-Dinitrotoluene	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				BTJ

Parameter	Units	Concentration 30 Day Average	Concentration Daily Maximum	Loading (kg/day)[a] 30 Day Average	Loading (kg/day)[a] Daily Maximum	Basis[b]
4-Nitrophenol	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - - -				BTJ
4,6-Dinitro-o-cresol	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - - -				BTJ
Phenolic 4AAP, Total	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - - -				BTJ
Phenol	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - - -				BTJ
Naphthalene	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - - -				BTJ
Bis(2-ethylhexyl) Phthalate	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - - -				BTJ
Di-N-Butylphthalate	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - - -				BTJ
Mercury	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - - -				BTJ
Biochemical Oxygen Demand (5 day)	mg/L	35	70	29.9	59.7	BADCT

[a] Effluent loadings based on average design discharge flow of 0.225 MGD.

[b] Definitions: **BADCT** = Best Available Demonstrated Control Technology, 40 CFR Part 122.29
BTJ = Best Technical Judgment

Table 11. Final Effluent Limits and Monitoring Requirements for Ashtabula Energy, LLC Outfall 3IN00387603 and the Basis for Their Recommendation.

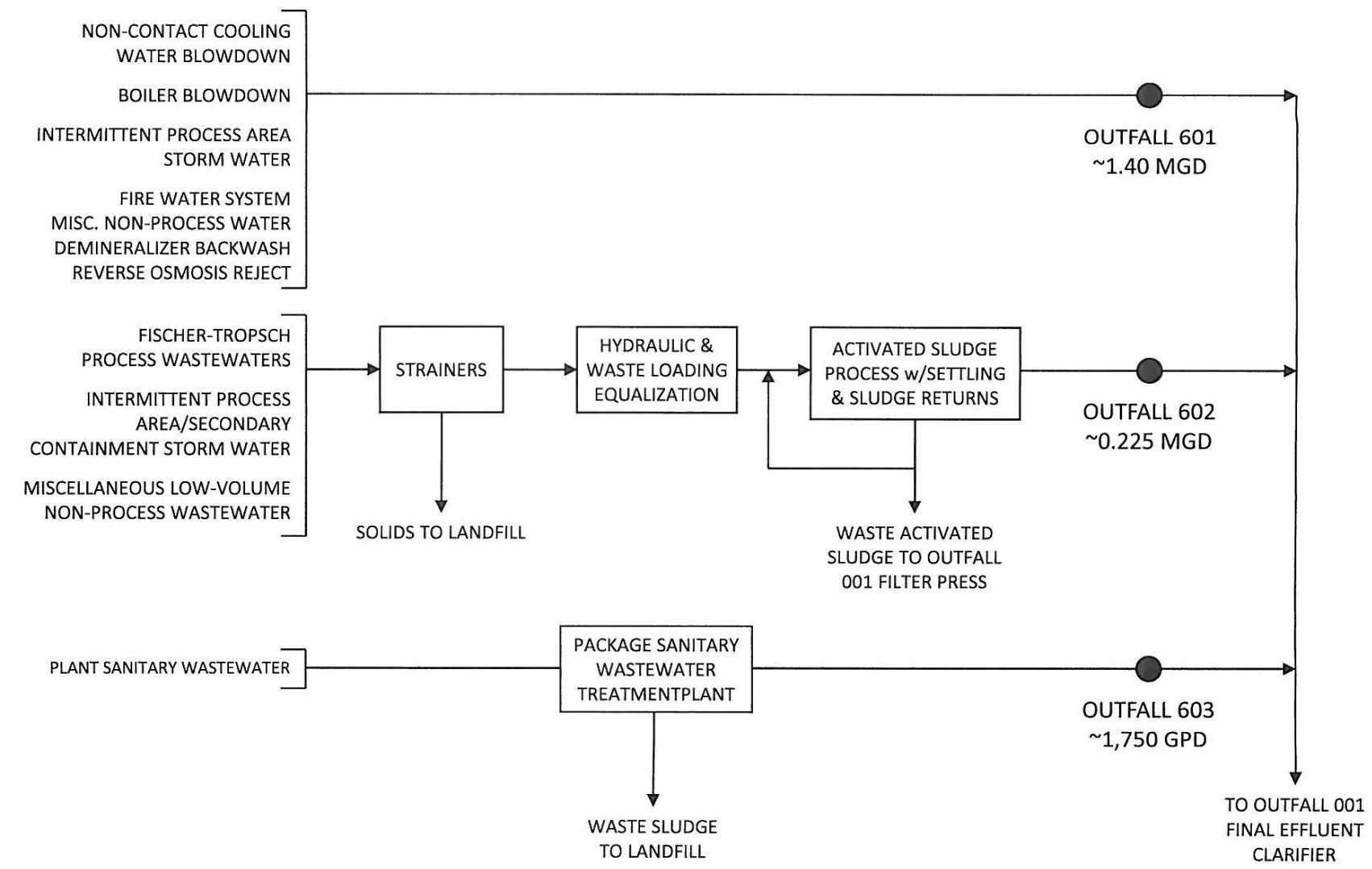
		Concentration		Loading (kg/day)[a]		
Parameter	**Units**	**30 Day Average**	**Daily Maximum**	**30 Day Average**	**Daily Maximum**	**Basis[b]**
Flow Rate	GPD	- - - - - - - - - - - Monitor - - - - - - - - - - - -				M[c]
pH	SU	6.5 - 9.0		--	--	BADCT
Dissolved Oxygen	mg/L	Minimum 6.0				BADCT
Total Suspended Solids	mg/L	12	18[d]	0.0909	0.137[d]	BADCT
Ammonia						
Summer	mg/L	1.0	1.5[d]	0.00757	0.0114[d]	BADCT
Winter	mg/L	3.0	4.5[d]	0.0228	0.0341[d]	BADCT
Turbidity, Severity - Units	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - - -				BTJ
Chlorine, Total Residual	mg/L	--	0.038	--	--	BADCT
E. coli	#/100 mL	126	284[d]	--	--	BADCT
Biochemical Oxygen Demand (5 day)	mg/L	10	15[d]	0.0757	0.114[d]	BADCT

[a] Effluent loadings based on average design discharge flow of 0.002 MGD.

[b] Definitions: **BADCT** = Best Available Demonstrated Control Technology, 40 CFR Part 122.29
BTJ = Best Technical Judgment
M = Division of Surface Water NPDES Permit Guidance 1: Monitoring frequency requirements for Sanitary Discharges

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

[d] 7 day average limit



Attachment 1.–Water Flow Diagram for Ashtabula Energy