

National Pollutant Discharge Elimination System (NPDES) Permit Program

FACT SHEET

Regarding an NPDES Permit To Discharge to Waters of the State of Ohio
for AK Steel Corporation – Mansfield Works

Public Notice No.: 12-10-007
Public Notice Date: October 4, 2012
Comment Period Ends: November 4, 2012

Ohio EPA Permit No.: 2ID00003*HD
Application No.: OH0006840

Name and Address of Applicant:

AK Steel Corporation
Mansfield Works
P.O. Box 249
Mansfield, Ohio 44901

Name and Address of Facility Where

Discharge Occurs:

AK Steel Corporation
Mansfield Works
913 Bowman Street
Mansfield, Ohio 44903
Richland County

Receiving Water: Rocky Fork

Subsequent
Stream Network: Mohican River, Walhonding River,
Muskingham River, Ohio River

Introduction

Development of a Fact Sheet for NPDES permits is mandated by Title 40 of the Code of Federal Regulations (CFR), 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 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.

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 the United States EPA (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

Fact Sheet for NPDES Permit Renewal, AK Steel Corporation – Mansfield Works, 2012

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

Most of the effluent limits and monitoring requirements in the current permit are proposed to be continued.

New limits are being proposed at Outfall 001 for lead and zinc. Limits for lead and zinc are required by Federal Effluent Guidelines (FEG) 40 CFR 420.64 and 420.77(c)(1). New Source Performance Standards (NSPS) and Best Conventional Technology (BCT) limits for the Iron and Steel Manufacturing Point Source Industry, found in 40 CFR Part 420 (Subcategories F and G).

New monitoring at Outfalls 002 and 003 are being proposed for zinc and cadmium. These parameters showed no reasonable potential when allocated at Outfalls 002 and 003, but did show reasonable potential when allocated to Outfall 004. Outfall 004 has been eliminated and flows re-routed to Outfalls 002 and 003. Based on BPJ, monitoring is proposed to document no reasonable potential will exist at Outfalls 002 and 003 following the elimination of Outfall 004.

New monitoring at Outfall 006 is being proposed for barium based on reasonable potential. New monitoring is being proposed at Outfalls 001 and 006 for chronic toxicity. New monitoring for mercury is proposed at Outfalls 001 and 006 based on BPJ. Limits for chronic toxicity at Outfall 003 are proposed to be removed, but monitoring at a low frequency is proposed to continue.

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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 and Compliance Section
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 Sara Hise, (614) 644-4824, sara.hise@epa.state.oh.us.

Location of Discharge/Receiving Water Use Classification

AK Steel Corporation – Mansfield Works discharges to the Rocky Fork of the Mohican River at River Mile (RM) 14.95 (Outfall 001), RM 14.48 (Outfall 002), RM 14.72 (Outfall 003), and RM 15.65 (Outfall 006).

Figure 1 shows the approximate location of the facility. See Figure 2 for a schematic representation of the study area showing RM locations of the AK Steel Corporation – Mansfield Works outfalls.

This segment of the Rocky Fork of the Mohican River is described by Ohio EPA River Code: 17-733, U.S. EPA River Reach #: 05040002-020, County: Richland, Ecoregion: Erie Drift Plan. The Rocky Fork of the Mohican River is designated for the following uses under Ohio's WQS (Ohio Administrative Code [OAC] 3745-1-24): Warmwater Habitat (WWH), Agricultural Water Supply (AWS), Industrial Water Supply (IWS), and Class B 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 (Ohio Administrative Code [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 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 AWS or IWS.

Facility Description

AK Steel Corporation – Mansfield Works manufactures flat rolled carbon, and stainless and silicon steel from scrap steel. Production operations resulting in NPDES discharges include: electric arc furnace, hot strip mill and a thin slab caster.

The raw water used at the plant includes well water supplied from company-owned wells, river water, and city-supplied water. Wastewater from this facility is discharged through four NPDES permitted outfalls to the Rocky Fork of the Mohican River, pretreated and discharged to the city sewer system, or shipped off-site for deep well disposal.

The process operations performed at this facility are classified under the Standard Industrial Classification (SIC) Code 3312: Blast Furnaces, Steel Works, and Rolling Mills. Thus, the Hot Forming and Continuous Casting Subcategories of Iron and Steel Manufacturing categorical regulations at 40 CFR 420.64 and 420.77(c)(1) apply to the process wastewater generated at the facility.

Description of Existing Discharge

AK Steel Corporation – Mansfield Works is permitted to discharge effluent at four locations to the Rocky Fork of the Mohican River between RM 15.65 and 14.48.

Outfall 001 discharges process wastewater. It consists of Caster Blowdown, Hot Strip Mill Blowdown, Electric Furnace Cooling Tower Blowdown, and storm water. Treatment includes oil removal and sedimentation before the effluent is discharged.

Outfall 002 discharges non-contact cooling water (NCCW) generated at the Tandem Mill/Pickle Line and storm water. The discharge is not treated.

Outfall 003 discharges overflow from the office pond, boiler blowdown, and storm water. The discharge is not treated.

Outfall 004 used to discharge NCCW from Tandem Mill, Air Compressor cooling water and storm water. Outfall 004 has been eliminated and flow has been diverted to Outfalls 002 and 003.

Outfall 006 discharges slag quench water, dust suppression water, and storm water. Treatment includes pH adjustment and sedimentation prior to discharge.

Table 1 presents chemical specific data compiled from the NPDES renewal application, data reported in annual pretreatment reports, and data collected by Ohio EPA.

Table 2 presents a summary of unaltered Discharge Monitoring Report (DMR) data for all the outfalls. Data are presented for the period January 2007 through December 2011, and current permit limits are provided for comparison.

Table 3 summarizes the chemical specific data for the outfalls by presenting the average and maximum PEQ values.

Table 4 summarizes the results of chronic whole effluent toxicity tests of the final effluent at Outfall 003.

Assessment of Impact on Receiving Waters

Biological sampling conducted during the 2007 field season in the Rocky Fork Mohican River showed non-Attainment of the WWH use designation downstream of the AK Steel Corporation – Mansfield Works outfalls. In addition to the 2007 sampling in the Mohican basin, a special study was conducted in the Rocky Fork during the 2009 field season in the vicinity of the Peabody Barnes property. Three of the sampling points during this study were just downstream of the AK Steel Corporation – Mansfield Works discharges.

Table 7 shows the location of the sampling sites throughout the study area and the causes and sources of the biological impairments. Sites sampled in 2009 are identified, all others are 2007 sites. See Figure 2 for a schematic representation of the study area showing river mile locations of the AK Steel and Mansfield WWTP outfalls. Urban stormwater runoff is listed as one cause of impairment; AK Steel may be contributing to this.

The most upstream biological sampling point in both 2007 and 2009 was just downstream of the four AK Steel Corporation – Mansfield Works outfalls. No information on the attainment status of the Rocky Fork upstream of these outfalls is available. For more details on the biological sampling that took place in 2007 and 2009, refer to the Ohio EPA Technical Reports; *Biological and Water Quality Study of the Mohican River and Selected Tributaries 2007*; July 2009 and *Biological Assessment of the Rocky Fork Mohican River – Peabody Barnes Property*; October 2009. These reports can be found on the Ohio EPA website at this location:

http://www.epa.ohio.gov/dsw/document_index/psdindx.aspx

A TMDL study is currently in progress to address impairments to the Rocky Fork and other streams in the Mohican River basin. This study is scheduled to be completed sometime in 2012 and will be posted on the Ohio EPA website at http://www.epa.state.oh.us/dsw/tmdl/index.aspx#TMDL_Projects.

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

Effluent data for AK Steel Corporation – Mansfield Works were used to determine what parameters should undergo WLA. The parameters discharged are identified by the data available to Ohio EPA - Discharge Monitoring Report (DMR) data submitted by the permittee, compliance sampling data collected by Ohio EPA, and any other data submitted by the permittee, such as priority pollutant scans required by the NPDES application or by pretreatment, or other special conditions in the NPDES permit. The sources of effluent data used in this evaluation are as follows:

Self-monitoring data (DMR)	January 2007 through December 2012
NPDES Application Form 2.C data	2011

For conservative parameters, the AK Steel Corporation – Mansfield Works outfalls are considered to be interactive with Mansfield Wastewater Treatment Plant (WWTP). Available assimilative capacity in Rocky Fork for the conservative parameters requiring WLAs was distributed between the discharges using the conservative substance wasteload allocation (CONSWLA) model.

Outliers

The data were examined, and the following values were removed from the evaluation to give a more reliable PEQ: for outfall 002; copper, one value of 480. µg/L; for outfall 003; copper, two values of 55.0 and 82.0 µg/L.

This data is evaluated statistically, and PEQ values are calculated for each pollutant. Average PEQ (PEQ_{avg}) values represent the 95th percentile of monthly average data, and maximum PEQ (PEQ_{max}) values represent the 95th percentile of all data points. The average and maximum PEQ values are presented in 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 10 for a summary of the screening results.

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).

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

Aquatic life (WWH)		
Toxics (metals, organics, etc.)	Average	Annual 7Q10

Ammonia	Maximum Average	Annual 1Q10 Summer 30Q10 Winter 30Q10
AWS Human Health (nondrinking)		Harmonic mean flow Harmonic mean flow

Allocations are developed using a percentage of stream design flow as specified in Table 8, and allocations cannot exceed the Inside Mixing Zone Maximum criteria.

The data used in the WLA are listed in Tables 1 and 2. The WLA results to maintain all applicable criteria are presented in Table 9.

Dissolved Metals Translators

A dissolved metals translator (DMT) is the factor used to convert a dissolved metal aquatic life criterion to an effective total recoverable aquatic life criterion with which a total recoverable aquatic life allocation can be calculated as required in the NPDES permit process. Currently, a DMT is based on site- or area-specific field data; each field data sample consists of a total recoverable measurement paired with a dissolved metal measurement. For the Rocky Fork Mohican River downstream of the AK Steel Corporation – Mansfield Works outfalls, there were five such paired samples available applicable to cadmium, chromium, copper, lead, nickel and zinc, and two for silver.

To account for the limited quantity of data, the DMT for each of these metals was determined as the lower end of the 95% confidence interval (1-tail) about the geometric mean of the total recoverable-to-dissolved ratios of the sample pairs. Each DMT is metal-specific and is applied by multiplying the dissolved criteria by the DMT, resulting in total effective recoverable criteria which can be used in the WLA procedures. The calculated DMT for silver was less than one; therefore, it was considered invalid and the total recoverable criteria were applied.

In some cases, it is possible that the use of a DMT may result in instream concentrations of metals that may increase the risk of non-attainment of the aquatic life use designation. This was evaluated for the Mansfield WWTP and AK Steel Corporation – Mansfield Works. The application of the dissolved metal translators resulted in effective total recoverable criteria for cadmium, copper, lead, and zinc that were higher than the total recoverable criteria listed in OAC 3745-1. The Rocky Fork near the Mansfield WWTP and AK Steel Corporation – Mansfield Works is not attaining its designated use and the discharge of metals from these facilities is contributing to the non-attainment. Therefore, in order to provide an adequate margin of safety for protection of aquatic life, the effective total recoverable criteria that resulted from the application of the DMTs were adjusted to levels that are protective of the applicable aquatic life use designation and biological criteria. Biological threshold values were available for cadmium, lead and zinc.

The DMTs used in the modeling for the Rocky Fork Mohican River are based on sample data collected in 1998 and may no longer be representative of current instream conditions. Should AK Steel -Mansfield wish to continue using DMTs for future WLAs (beyond the 2012 permit), a new DMT analysis or study must be completed prior to the next permit renewal and submitted with the renewal application. See paragraphs F and G in rule 3745-2-04 of the OAC for requirements in developing a DMT study.

Whole Effluent Toxicity

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 allowable effluent toxicity (AET) is a factor considered in evaluating WET. The AET calculations are similar to those for aquatic life criteria (using the chronic toxicity unit TU_c and the acute toxicity unit TU_a). TU_a will be calculated interactively due to the proximity of the outfalls. For AK Steel Corporation – Mansfield Works, the AET values as follows:

Outfall	TU_a	TU_c
001	0.304	1.15
003	0.304	3.07
004	0.304	33.2
002	0.304	7.24
006	0.304	43.2

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.

Reasonable Potential/ Effluent Limits/Hazard 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 9. 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 [$(PEQ_{avg} \div PEL_{avg}) \times 100$, or $(PEQ_{max} \div PEL_{max}) \times 100$], the parameters are assigned to group 3, 4, or 5. The groupings are listed in Table 10.

The final effluent limits are determined by evaluating the groupings in conjunction with other applicable rules and regulations. Table 11 presents the final effluent limits and monitoring requirements proposed for AK Steel Corporation – Mansfield Works outfalls 2ID00003001, 2ID00003002, 2ID00003003, and 2ID00003006 and the basis for their recommendation. No effluent limits or monitoring requirements are proposed for outfall 2ID00003004 because it has been eliminated.

Outfall 001

Temperature and Flow Rate

Monitoring is proposed to continue from the existing permit for these parameters in order to assist in the evaluation of effluent quality and treatment plant performance.

Oil and Grease and pH

The concentration limits for oil and grease and pH are based on WQS and are proposed to continue. The loading limits for oil and grease is based on the FEG in 40 CFR 420.64 (Continuous Casting subcategory NSPS) and 420.77(c)(1) (Hot Forming subcategory BCT). The limits are proposed to continue based on anti-backsliding (ABS) rules (OAC 3745-33-05(E)), which prevent the imposition of less stringent limits than those in the existing permit unless specific conditions have been satisfied, and on antidegradation rules (OAC 3745-1-05).

Total Suspended Solids

Since the facility has not requested an increased load and there have been no changes or increased operation, the limits for total suspended solids (TSS) are proposed to continue based on ABS rules (OAC 3745-33-05(E)), which prevent the imposition of less stringent limits than those in the existing permit unless specific conditions have been satisfied, and on antidegradation rules (OAC 3745-1-05).

Copper

The Ohio EPA risk assessment (Table 10) places copper in group 3. This placement, as well as the data in Tables 1, 2 and 3, support that copper does not have the reasonable potential to contribute to WQS exceedances, and limits are not necessary to protect water quality. Monitoring at a low frequency is proposed to document that this pollutant continues to remain at low levels.

Chromium

Ohio EPA risk assessment (Table 10) places total chromium in group 4. This placement, as well as the data in Tables 1, 2 and 3, support that this parameter does not have the reasonable potential to contribute to WQS exceedances, and limits are not necessary to protect water quality. Monitoring for Group 4 pollutants (where PEQ exceeds 50 percent of the WLA) is required by OAC Rule 3745-33-07(A)(2). Chromium monitoring is proposed at a frequency of once per month.

Barium and Fluoride

The Ohio EPA risk assessment (Table 10) places barium and fluoride in group 5, which recommends limits to protect water quality. Using the discretion allowed the Director under OAC 3745-33-07(A)(5), monitoring, rather than limits, is proposed for these pollutants. The PEQ values calculated for outfall 001 (Table 3) may not be representative of its actual levels in the plant effluent; they were based on one data point. The purpose of the proposed monitoring is to collect additional data on the frequency of occurrence and variability of these pollutants in the plant's effluent.

Silver

The Ohio EPA risk assessment (Table 10) places silver in group 5, which recommends limits to protect water quality. Using the discretion allowed the Director under OAC 3745-33-07(A)(5), monitoring, rather than limits, is proposed for this pollutants. The PEQ values calculated for outfall 001 (Table 3) may not be representative of its actual levels in the plant effluent; they were based on three detections. The purpose of the proposed monitoring is to collect additional data on the frequency of occurrence and variability of this pollutant in the plant's effluent.

To ensure that data is obtained that allows Ohio EPA to make water quality-related decisions regarding silver, a special condition is proposed in Part II of the permit that provides guidance on the MDL (method detection limit) the permittee should use in analyzing for this contaminant.

Lead and Zinc

Loading limits for lead and zinc are required by FEG 40 CFR 420.64 and 420.77(c)(1). NSPS and BCT limits for the Iron and Steel Manufacturing Point Source Industry, found in 40 CFR Part 420 (Subcategories F and G), are based on the kilograms of pollutant allowed to be discharged per 1000 kg of production. The plant production rates used are the maximum 30-day average rates for the past five years. Calculations for these parameters, as well as TSS and oil and grease (also required by FEG 40 CFR 420.64 and 420.77(c)(1)) are presented in Attachment 1. Concentration limits are protective of WQS.

Mercury

Ohio's WQS implementation rules [OAC 3745-2-05(A)(2)(d)(iv)] required a phase out of mixing zones for bioaccumulative chemicals of concern (BCCs) as of November 15, 2010. This rule applied statewide. Mercury is a BCC. The mixing zone phase-out means that as of November 15, 2010 all dischargers requiring mercury limits in their NPDES permit must meet WQS at the end-of-pipe (12 ng/L monthly average in the Ohio River basin). Testing for mercury has been performed at the facility as part of other routine sampling. No mercury was detected in the results, which means reasonable potential cannot be calculated, but the analytical method utilized was not the most sensitive available. No mercury-specific monitoring has been performed. Based on BPJ, monitoring at a low frequency is proposed to collect additional data on the frequency of occurrence and variability of this pollutant in the plant's effluent.

Allowable Effluent Toxicity

The calculated AET value for this outfall is 1.15 TU. Toxicity testing at the facility has not resulted in any chronic or acute toxicity at Outfall 001. However, because the stream has not attained its aquatic life use designation, annual chronic toxicity testing with the determination of acute endpoints is proposed for *Ceriodaphnia dubia* in order to document that there is no reasonable potential for toxicity.

Outfall 002

Flow Rate

Monitoring is proposed to continue from the existing permit for this parameter in order to assist in the evaluation of effluent quality and treatment plant performance.

Oil and Grease and pH

The concentration limits for oil and grease and pH are based on WQS and are proposed to continue.

Total Suspended Solids

Monitoring for TSS is proposed to continue to document that this pollutant remains at low levels.

Copper

The Ohio EPA risk assessment (Table 10) places copper in group 2. This placement, as well as the data in Tables 1, 2 and 3, support that copper does not have the reasonable potential to contribute to WQS exceedances, and limits are not necessary to protect water quality. Monitoring at a low frequency is proposed to document that this pollutant continues to remain at low levels.

Silver

The Ohio EPA risk assessment (Table 10) places silver in group 5, which recommends limits to protect water quality. Using the discretion allowed the Director under OAC 3745-33-07(A)(5), monitoring, rather than limits, is proposed for this pollutants. The PEQ values calculated for outfall 001 (Table 3) may not be representative of its actual levels in the plant effluent; they were based on one detection.

The purpose of the proposed monitoring is to collect additional data on the frequency of occurrence and variability of this pollutant in the plant's effluent.

To ensure that data is obtained that allows Ohio EPA to make water quality-related decisions regarding silver, a special condition is proposed in Part II of the permit that provides guidance on the MDL (method detection limit) the permittee should use in analyzing for this contaminant.

Cadmium and Zinc

Cadmium and zinc were assessed as part of the Outfall 004 WLA. Outfall 004 has been removed, but flow has been diverted to this outfall and Outfall 003. The Ohio EPA risk assessment (Table 10) places cadmium and zinc in group 4. 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 for Group 4 pollutants (where PEQ exceeds 50 percent of the WLA) is required by OAC Rule 3745-33-07(A)(2). In addition, cadmium and zinc effluent quality falls within 75 percent of the WLA. Under OAC 3745-33-07(A)(2), parameters in this range must have a tracking requirement in the permit that specifies reductions in pollutant concentrations if effluent concentrations exceed the WLA.

However, based on BPJ, monitoring is proposed without the tracking requirement because these parameters were not directly allocated for Outfall 002. The purpose of the proposed monitoring is to collect additional data on the frequency of occurrence and variability of these pollutants in the plant's effluent.

Outfall 003

Flow Rate

Monitoring is proposed to continue from the existing permit for this parameter in order to assist in the evaluation of effluent quality and treatment plant performance.

Oil and Grease and pH

The concentration limits for oil and grease and pH are based on WQS and are proposed to continue.

Total Suspended Solids

Monitoring for TSS is proposed to continue to document that this pollutant remains at low levels.

Copper

The Ohio EPA risk assessment (Table 10) places copper in group 2. This placement, as well as the data in Tables 1, 2 and 3, support that copper does not have the reasonable potential to contribute to WQS exceedances, and limits are not necessary to protect water quality. Monitoring at a low frequency is proposed to document that this pollutant continues to remain at low levels.

Silver

The Ohio EPA risk assessment (Table 10) places silver in group 5, which recommends limits to protect water quality. Using the discretion allowed the Director under OAC 3745-33-07(A)(5), monitoring, rather than limits, is proposed for this pollutants. The PEQ values calculated for outfall 001 (Table 3) may not be representative of its actual levels in the plant effluent; they were based on three detections. The purpose of the proposed monitoring is to collect additional data on the frequency of occurrence and variability of these pollutants in the plant's effluent.

To ensure that data is obtained that allows Ohio EPA to make water quality-related decisions regarding silver, a special condition is proposed in Part II of the permit that provides guidance on the MDL (method detection limit) the permittee should use in analyzing for this contaminant.

Cadmium and Zinc

Cadmium and zinc were assessed as part of the Outfall 004 WLA. Outfall 004 has been removed, but flow has been diverted to this outfall and Outfall 002. The Ohio EPA risk assessment (Table 10) places cadmium and zinc in group 4. 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 for Group 4 pollutants (where PEQ exceeds 50 percent of the WLA) is required by OAC Rule 3745-33-07(A)(2). In addition, cadmium and zinc effluent quality falls within 75 percent of the WLA. Under OAC 3745-33-07(A)(2), parameters in this range must have a tracking requirement in the permit that specifies reductions in pollutant concentrations if effluent concentrations exceed the WLA.

However, based on BPJ, monitoring is proposed without the tracking requirement because these parameters were not directly allocated for Outfall 003. The purpose of the proposed monitoring is to collect additional data on the frequency of occurrence and variability of these pollutants in the plant's effluent.

Allowable Effluent Toxicity

The calculated AET value for this outfall is 3.07 TU. Table 5 shows the toxicity results for Outfall 003 and there have been no detections in nearly three years. It is proposed that the limits be removed. However, because the stream has not attained its aquatic life use designation, annual chronic toxicity testing with the determination of acute endpoints is proposed for *Ceriodaphnia dubia* in order to document that there is no reasonable potential for toxicity.

Outfall 006

Flow Rate

Monitoring is proposed to continue from the existing permit for this parameter in order to assist in the evaluation of effluent quality and treatment plant performance.

Oil and Grease and pH

The concentration limits for oil and grease and pH are based on WQS and are proposed to continue.

Total Suspended Solids

Monitoring for TSS is proposed to continue to document that this pollutant remains at low levels.

Nickel, Zinc, Cadmium, Copper, Molybdenum, and Manganese

The Ohio EPA risk assessment (Table 10) places nickel, zinc, cadmium, and copper in groups 2 and 3 and manganese into group 1. 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 at a low frequency is proposed to document that these pollutants continue to remain at low levels.

Chromium and Lead

The Ohio EPA risk assessment (Table 10) places total chromium and lead in group 4. 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 for Group 4 pollutants (where PEQ exceeds 50 percent of the WLA) is required by OAC Rule 3745-33-07(A)(2). The monitoring frequency is proposed to be increased from once a quarter to

once a month in order to collect additional data on the frequency of occurrence and variability of these pollutants in the plant's effluent.

Barium

The Ohio EPA risk assessment (Table 10) places barium in group 5, which recommends limits to protect water quality. Using the discretion allowed the Director under OAC 3745-33-07(A)(5), monitoring, rather than limits, is proposed for this pollutant. The PEQ values calculated for outfall 006 (Table 3) may not be representative of its actual levels in the plant effluent they were based on one data point. The purpose of the proposed monitoring is to collect additional data on the frequency of occurrence and variability of this pollutant in the plant's effluent.

Mercury

Ohio's WQS implementation rules [OAC 3745-2-05(A)(2)(d)(iv)] required a phase out of mixing zones for BCCs as of November 15, 2010. This rule applied statewide. Mercury is a BCC. The mixing zone phase-out means that as of November 15, 2010 all dischargers requiring mercury limits in their NPDES permit must meet WQS at the end-of-pipe (12 ng/L monthly average in the Ohio River basin). Testing for mercury has been performed at the facility as part of other routine sampling. No mercury was detected in the results, which means reasonable potential cannot be calculated, but the analytical method utilized was not the most sensitive available. No mercury-specific monitoring has been performed. Based on BPJ, monitoring at a low frequency is proposed to collect additional data on the frequency of occurrence and variability of this pollutant in the plant's effluent.

Allowable Effluent Toxicity

The calculated AET value for this outfall is 43.2 TU. Toxicity testing at the facility has not resulted in any chronic or acute toxicity at Outfall 006. However, because the stream has not attained its aquatic life use designation, annual chronic toxicity testing with the determination of acute endpoints is proposed for *Ceriodaphnia dubia* in order to document that there is no reasonable potential for toxicity.

Additional monitoring requirements proposed at the final effluent 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

Outfall Signage

Part II of the permit includes requirements for the permittee to place a sign at each outfall to the Rocky Fork of the Mohican River providing information about the discharge. Signage at outfalls is required pursuant to Ohio Administrative Code 3745-33-08(A).

Stormwater

Stormwater discharges at AK Steel – Mansfield Works are currently covered by an industrial stormwater general permit (2GR00074*EG). The general permit expires on December 31, 2016, before the expiration date of this individual permit. At that time, the facility will need to submit a Notice of Intent (NOI) for coverage under the new general permit for industrial stormwater, submit a No Exposure Certification, or comply with Parts IV, V, and VI of this individual permit.

Figure 1. Approximate Location of AK Steel Corporation - Mansfield Works

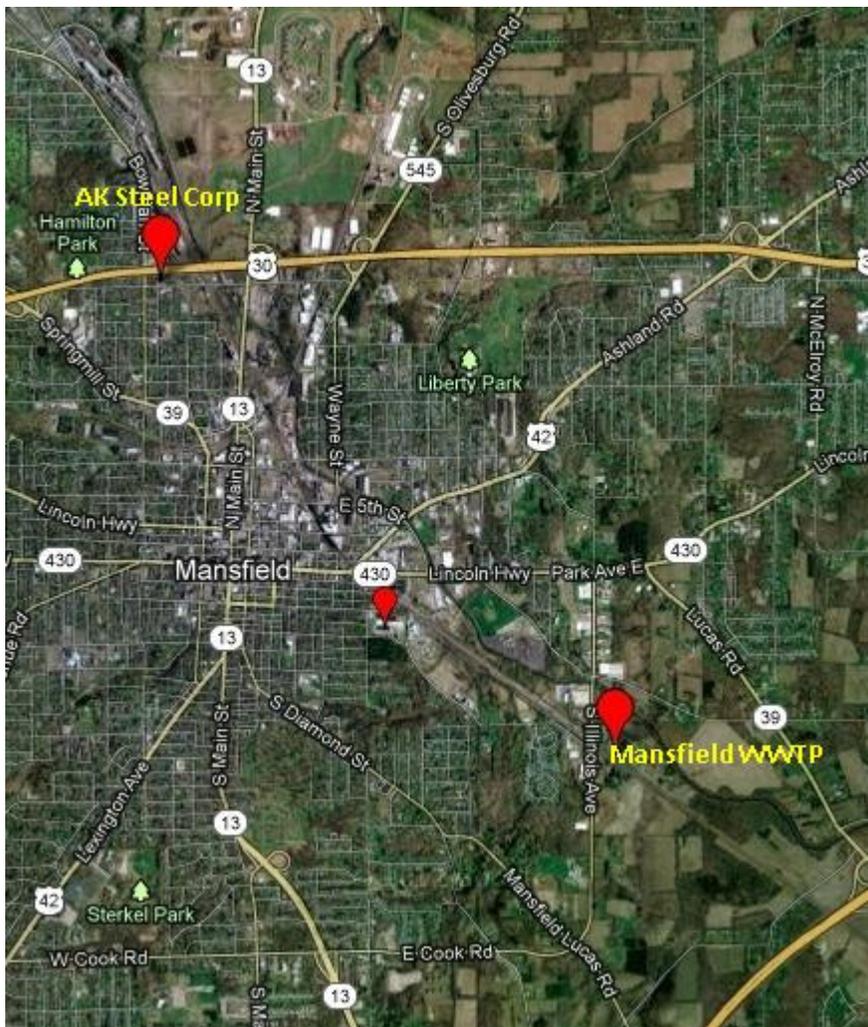


Figure 2. Schematic Representation of the Rocky Fork Mohican Study Area

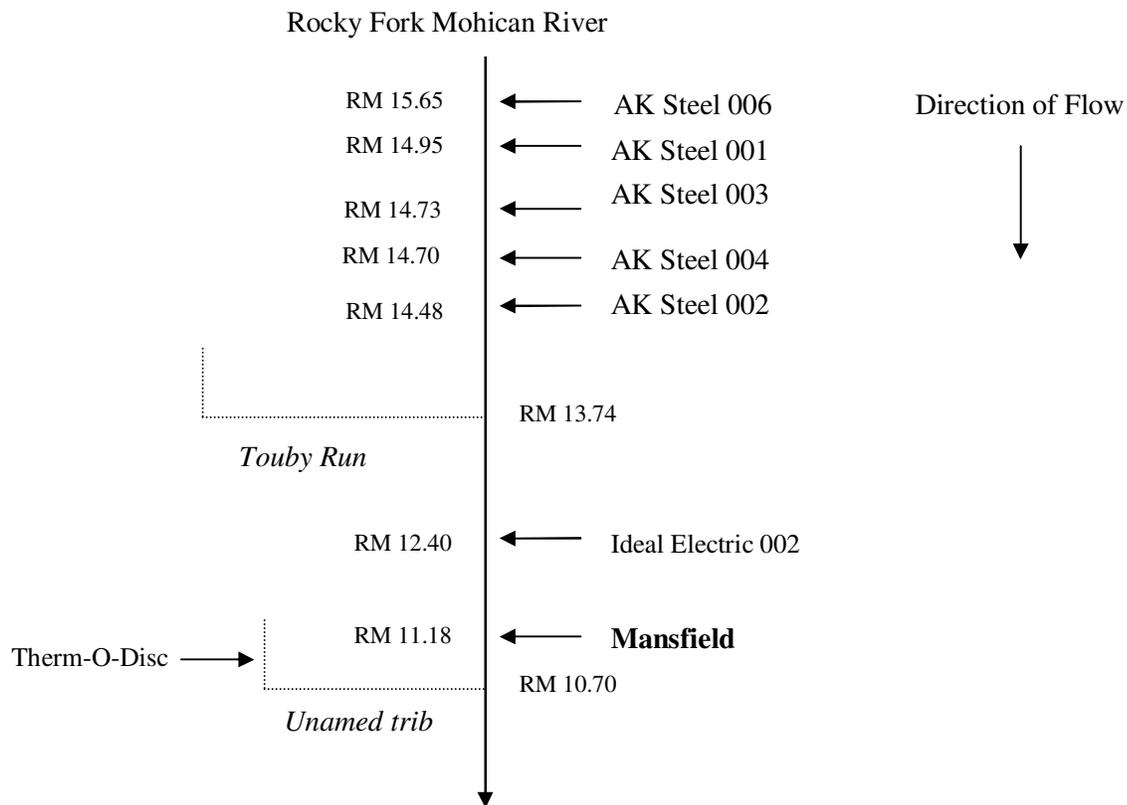


Table 1. Effluent Characterization Using NPDES Renewal Application Form 2C

<i>Parameter</i>	<i>Units</i>	<i>Outfall 001</i>	<i>Outfall 006</i>
		9/27/2011	10/5/2011
Aluminum	mg/L	187	778
Ammonia	mg/L	< 0.2	0.69
Antimony	µg/L	5.7	< 5.0
Arsenic	µg/L	< 5.0	< 5.0
Barium	µg/L	47	151
Beryllium	µg/L	< 3	< 3
Biological Oxygen Demand	mg/L	< 2	< 2
Boron	mg/L	< 100	689
Bromide	mg/L	< 5	< 5
Cadmium	µg/L	< 3	< 3
Chemical Oxygen Demand	mg/L	< 10	17
Chlorine, total residual	mg/L	< 0.04	< 0.04
Chromium	µg/L	17	17
Cobalt	µg/L	< 20	< 20
Copper	µg/L	< 8	< 8
Cyanide	mg/L	< 0.01	< 0.01
Fluoride	mg/L	1.83	1.49
Iron	mg/L	93	369
Lead	µg/L	< 10	< 10
Magnesium	mg/L	32.3	5.09
Manganese	mg/L	< 10	NA
Mercury	µg/L	< 0.2	< 0.2
Molybdenum	µg/L	70	29
Nickel	µg/L	< 8	< 8
Nitrate+Nitrite	mg/L	1.74	2.4
Oil & Grease	mg/L	< 5.0	NA
Phenols	mg/L	< 0.05	0.14
Phosphorus	mg/L	0.07	< 0.04
Selenium	µg/L	< 4	< 4
Silver	µg/L	< 1	< 1
Sulfate	mg/L	29	46
Sulfide	mg/L	< 0.05	< 0.5
Sulfite	mg/L	< 2	< 0.64
Surfactants	mg/L	< 0.5	< 0.05
Thallium	µg/L	< 5	< 5
Tin	mg/L	< 200	< 200
Titanium	mg/L	< 10	< 10
Total Organic Carbon	mg/L	< 5	< 5

Table 1. Effluent Characterization Using NPDES Renewal Application Form 2C

<i>Parameter</i>	<i>Units</i>	<i>Outfall 001</i> 9/27/2011	<i>Outfall 006</i> 10/5/2011
Total Organic Nitrogen	mg/L	< 1.0	< 1.0
Total Suspended Solids	mg/L	< 4	4.4
Zinc	µg/L	< 10	13

NA = not analyzed

Table 2. Effluent Characterization Using Self-Monitoring Data

Parameter	Season	Units	Current Permit Limits		# Obs.	Percentiles		Data Range
			30 day	Daily		50 th	95 th	
<u>Outfall 001</u>								
Water Temperature	Annual	°C	MONITOR		1744	14	29	1-33
pH	Annual	S.U.	6.5 - 9.0		227	7.8	8.3	7-8.6
Total Suspended Solids	Annual	kg/day	64.6	138.5	224	4	16.8	0-87.8
Oil and Grease, Total	Annual	mg/L	10 MAXIMUM		230	0	5.86	0-9.7
Silver, Total Recoverable	Annual	µg/L	MONITOR		170	0	0	0-5
Lead, Total Recoverable	Annual	µg/L	MONITOR		102	0	0	0-33
Copper, Total Recoverable	Annual	µg/L	MONITOR		103	0	9	0-15
Flow Rate	Annual	MGD	MONITOR		1500	0.679	1.91	0-37400
<u>Outfall 002</u>								
pH	Annual	S.U.	6.5 - 9.0		234	7.9	8.2	7.1-8.6
Total Suspended Solids	Annual	mg/L	MONITOR		232	4	18	0-96
Oil and Grease, Total	Annual	mg/L	10 MAXIMUM		237	0	6.3	0-9.3
Silver, Total Recoverable	Annual	µg/L	MONITOR		126	0	0	0-5
Copper, Total Recoverable	Annual	µg/L	MONITOR		100	0	8.05	0-480
Flow Rate	Annual	MGD	MONITOR		707	0.0464	0.553	0-1020000
<u>Outfall 003</u>								
pH	Annual	S.U.	6.5 - 9.0		244	7.7	7.9	6.9-8.9
Total Suspended Solids	Annual	mg/L	MONITOR		243	0	25.5	0-188
Oil and Grease, Total	Annual	mg/L	10 MAXIMUM		247	0	5.07	0-9.8
Silver, Total Recoverable	Annual	µg/L	MONITOR		182	0	0	0-5
Copper, Total Recoverable	Annual	µg/L	MONITOR		110	0	0	0-82
Flow Rate	Annual	MGD	MONITOR		703	0.286	1.14	0.00019-3.78
Chronic Toxicity, Ceriodaphnia dubia	Annual	TU _c	1.36 MAXIMUM		10	0	1.21	0-1.3
<u>Outfall 004</u>								
pH	Annual	S.U.	6.5 - 9.0		109	8	8.6	7.1-10.1
Total Suspended Solids	Annual	mg/L	MONITOR		108	4	31.6	0-117
Oil and Grease, Total	Annual	mg/L	10 MAXIMUM		111	0	5.45	0-7
Silver, Total Recoverable	Annual	µg/L	MONITOR		80	0	0	0-1.8

Table 2. Effluent Characterization Using Self-Monitoring Data

Parameter	Season	Units	Current Permit Limits		# Obs.	Percentiles		Data Range
			30 day	Daily		50 th	95 th	
Zinc, Total Recoverable	Annual	µg/L	MONITOR		108	36	183	0-299
Lead, Total Recoverable	Annual	µg/L	MONITOR		77	0	2	0-25
Copper, Total Recoverable	Annual	µg/L	MONITOR		80	0	13	0-22
Flow Rate	Annual	MGD	MONITOR		600	0.000385	0.0707	0-3.21
Acute Toxicity, Ceriodaphnia dubia	Annual	TU _a	MONITOR		7	0	0	0-0
Outfall 006								
pH	Annual	S.U.	MONITOR		44	7.9	8.8	6.5-8.9
Total Suspended Solids	Annual	mg/L	MONITOR		44	6.15	28.8	0-62
Oil and Grease, Total	Annual	mg/L	10 MAXIMUM		44	0	0	0-9.9
Nickel, Total Recoverable	Annual	µg/L	MONITOR		14	0	0	0-0
Zinc, Total Recoverable	Annual	µg/L	MONITOR		14	0	30.4	0-46
Cadmium, Total Recoverable	Annual	µg/L	MONITOR		14	0	0	0-0
Lead, Total Recoverable	Annual	µg/L	MONITOR		14	0	18.7	0-20
Chromium, Total Recoverable	Annual	µg/L	MONITOR		14	12.5	66.1	0-68
Copper, Total Recoverable	Annual	µg/L	MONITOR		14	0	0	0-0
Molybdenum, Total Recoverable	Annual	µg/L	MONITOR		14	64.5	81.1	48-83
Manganese, Total Recoverable	Annual	µg/L	MONITOR		14	39	115	0-119
Flow Rate	Annual	MGD	MONITOR		44	0.0094	0.328	0-0.606

Table 3. Projected Effluent Quality Values

Parameter	Units	# of Samples	# > MDL	Average PEQ	Maximum PEQ
<u>Outfall 001</u>					
<i>Self-Monitoring (DMR) Data</i>					
Copper	µg/L	199	40	9.576	14.16
Lead	µg/L	199	3	16.86	23.1
Silver	µg/L	199	3	2.555	3.5
PCBs ^a	µg/L	6	0	--	--
<i>Form 2.C. Application Data</i>					
Fluoride	µg/L	1	1	8283	11346
Nitrate+Nitrite	mg/L	1	1	7.875	10.79
Phosphorus	mg/L	1	1	0.317	0.434
Sulfate	mg/L	1	1	131.3	179.8
Aluminum	µg/L	1	1	846.4	1159
Barium	µg/L	1	1	212.7	291.4
Iron	µg/L	1	1	420.9	576.6
Magnesium	mg/L	1	1	146.2	200.3
Molybdenum	µg/L	1	1	316.8	434
Antimony	µg/L	1	1	25.8	35.34
Chromium	µg/L	1	1	76.94	105.4
<u>Outfall 002</u>					
<i>Self-Monitoring (DMR) Data</i>					
Copper	µg/L	205	17	6.573	9.866
Silver	µg/L	157	1	2.92	4
PCBs ^a	µg/L	6	0	--	--
<u>Outfall 003</u>					
<i>Self-Monitoring (DMR) Data</i>					
Copper	µg/L	215	6	4.581	6.346
Silver	µg/L	212	3	2.555	3.5
PCBs ^a	µg/L	6	0	--	--
<u>Outfall 004</u>					
<i>Self-Monitoring (DMR) Data</i>					
Silver	µg/L	80	2	1.183	1.62
Zinc	µg/L	108	88	190.7	283.8
Cadmium	µg/L	77	4	1.38	1.89
Lead	µg/L	80	4	16.43	22.5
Copper	µg/L	80	13	10.02	15.54

Table 3. Projected Effluent Quality Values

Parameter	Units	# of Samples	# > MDL	Average PEQ	Maximum PEQ
PCBs ^a	µg/L	6	0	--	--
<u>Outfall 006</u>					
<i>Self-Monitoring (DMR) Data</i>					
Nickel	µg/L	14	0	--	--
Zinc ^b	µg/L	15	4	50.37	69
Cadmium	µg/L	14	0	--	--
Lead	µg/L	14	5	18.02	27.67
Chromium ^b	µg/L	15	11	74.46	102
Copper	µg/L	14	0	--	--
Molybdenum ^b	µg/L	15	15	84.95	112.3
Manganese	µg/L	14	12	130.3	178.5
<i>Form 2.C. Application Data</i>					
Ammonia	mg/L	1	1	3.123	4.278
Fluoride	µg/L	1	1	6744	9238
Nitrate+Nitrite	mg/L	1	1	10.86	14.88
Sulfate	mg/L	1	1	208.2	285.2
Aluminum	µg/L	1	1	3521	4824
Barium	µg/L	1	1	683.4	936.2
Boron	µg/L	1	1	3118	4272
Iron	µg/L	1	1	1670	2288
Magnesium	mg/L	1	1	23.04	31.56
Phenols	µg/L	1	1	633.6	868

^a = carcinogen

^b = Combined DMR and Form 2.C. Application Data

DMR = discharge monitoring report

MDL = method detection limit

PCB = polychlorinated biphenyl

PEQ = projected effluent quality

Table 4. Summary of Acute Toxicity Results for Outfalls 001, 002, and 004

Date	<i>Ceriodaphnia dubia</i>			<i>Pimephales promelas</i>		
	Acute Toxicity (TU _a)			Acute Toxicity (TU _a)		
	Outfall 001	Outfall 002	Outfall 004	Outfall 001	Outfall 002	Outfall 004
3/12/2007	AA	AA	AA	AA	AA	AA
6/4/2007	AA	AA	AA	AA	AA	AA
8/6/2007	AA	AA	AA	AA	AA	AA
12/10/2007	AA	AA	AA	AA	AA	AA
3/9/2008	AA	AA	AA	AA	AA	AA
6/3/2008	AA	AA	AA	AA	AA	AA
9/8/2008	NA	NA	AA	NA	NA	NA

AA = below detection limit (0.2 TU_a)

NA = not analyzed

TU_a = acute toxicity units

Table 5. Summary of Chronic Toxicity Results for Outfall 003

	<i>Ceriodaphnia dubia</i>	<i>Pimephales promelas</i>
Date	Chronic Toxicity (TU_c)	Chronic Toxicity (TU_c)
6/4/2007	1.3	AA
12/10/2007	AA	AA
6/3/2008	AA	AA
12/12/2008	AA	NA
6/3/2009	AA	NA
12/11/2009	1.1	NA
6/11/2010	AA	NA
12/10/2010	AA	NA
6/6/2011	AA	NA
12/6/2011	AA	NA

AA = below detection limit (1.0 TU_c)

NA = not analyzed

TU_c = chronic toxicity units

Table 6. Water Quality Criteria in the Study Area

Parameter	Units	Outside Mixing Zone Criteria				Inside Mixing Zone Maximum
		Average			Maximum Aquatic Life	
		Human Health	Agri-culture	Aquatic Life		
Antimony	µg/L	4300	--	190	900	1800
Arsenic	µg/L	--	100	150	340	680
Barium	µg/L	--	--	220	2000	4000
Bis(2-ethylhexyl)phthalate	µg/L	59	--	8.4	1100	2100
Boron	µg/L	--	--	3900	33000	65000
Bromodichloromethane	µg/L	460	--	--	--	--
Bromoform	µg/L	3600	--	230	1100	2200
Cadmium	µg/L	--	50	1.2 ^b	16	32
Chlorine, total residual	µg/L	--	--	11	19	38
Chloroform	µg/L	4700	--	140	1300	2600
Chromium ⁺⁶ (dissolved)	µg/L	--	--	11	16	31
Chromium	µg/L	--	100	300. ^c	2300. ^c	4600. ^c
Copper	µg/L	1300	500	32. ^c	53. ^c	110. ^c
Cyanide, free	µg/L	220000	--	12	46	92
Fluoride	µg/L	--	2000	--	--	--
Iron	µg/L	--	5000	--	--	--
Lead	µg/L	--	100	29. ^b	3700. ^c	7300. ^c
Mercury ^a	ng/L	12	10000	910	1700	3400
Molybdenum	µg/L	--	--	20000	190000	370000
Nickel	µg/L	4600	200	130. ^c	1200. ^c	2400. ^c
Nitrate+Nitrite	mg/L	--	100	--	--	--
Phenol	µg/L	4600000	--	400	4700	9400
Selenium	µg/L	11000	50	5	--	--
Silver	µg/L	--	--	1.3	9.9 ^c	20. ^c
Strontium	µg/L	--	--	21000	40000	81000
Thallium	µg/L	6.3	--	17	79	160
Toluene	µg/L	200000	--	62	560	1100
Zinc	µg/L	69000	25000	202. ^b	480. ^c	960. ^c

^a = bioaccumulative chemical of concern

^b = biological threshold value

^c = Effective Criteria Based on Application of Dissolved Metal Translator

Table 7. Results of the Biological Monitoring in the Rocky Fork Mohican Study Area

Stream	River Mile	Use Designation	Attainment Status	IBI	MIwb	ICI	QHEI Habitat	Causes	Sources
Rocky Fork Mohican River (2009)	14.5	WWH	Partial	38 ns	--	26*	49.5	Reduced habitat/ Siltation	Channelization/ Urban- Industrial Runoff
Rocky Fork Mohican River (2009)	14.3	WWH	FULL	38 ns	--	40	62.5		
Rocky Fork Mohican River (2007)	14.23	WWH	Partial	36 ns	--	F*	45	Nutrient/Eutrophication Bio- indicators, Metals	Unspecified Urban Stormwater, Contaminated Sediments
Rocky Fork Mohican River (2009)	14	WWH	NON	33*	--	20*	55	Reduced habitat/ Siltation	Channelization/ Urban- Industrial Runoff
Rocky Fork Mohican River (2007)	12.49	WWH	NON	28*	5.0*	P*	50.5	Nutrient/Eutrophication Bio- indicators	Unspecified Urban Stormwater
Rocky Fork Mohican River (2007)	10.13	WWH	NON	33*	7.0*	P*	88.5	Nutrient/Eutrophication Bio-indicators, Organic Enrichment (Sewage) Bio-Indicators	Unspecified Urban Stormwater, Municipal Point Source Discharges
Rocky Fork Mohican River (2007)	4.38	WWH	FULL	37 ns	7.4 ns	32 ns	91.5		

* = Significant departure from ecoregion biocriterion; poor and very poor results are underlined.

IBI = Index of Biotic Integrity

ICI = Invertebrate Community Index

MIwb = modified Index of Well-Being

ns = Nonsignificant departure from biocriterion (≤ 4 IBI or ICI units)

QHEI = Qualitative Habitat Evaluation Index

WWH = warmwater habitat

Table 8. Instream Conditions and Discharger Flow

Parameter	Units/Outfall	Season	Value	Basis
<u>Rocky Fork Mohican River Upstream</u>				
7Q10	cfs	annual	0.35	USGS gage #03130500,1946-1978 data
1Q10	cfs	annual	0.12	USGS gage #03130500,1946-1978 data
30Q10	cfs	summer	0.56	USGS gage #03130500,1946-1978 data
	cfs	winter	1.4	USGS gage #03130500,1946-1978 data
Harmonic Mean Flow	cfs	annual	2.44	USGS gage #03130500,1946-1978 data
<u>Mixing Assumption</u>				
	%	average	100	Stream-to-discharge ratio
	%	maximum	100	Stream-to-discharge ratio
<u>Instream Temperature</u>				
	°C	summer	21.6	Mansfield 901; 20 values, 2007-11
	°C	winter	6.8	Mansfield 901; 14 values, 2007-11
<u>Instream pH</u>				
	S.U.	summer	7.96	Mansfield 901; 19 values, 2007-11
	S.U.	winter	7.89	Mansfield 901; 14 values, 2007-11
<u>Hardness</u>				
	mg/L	annual	288	Mansfield 901; 59 values, 2007-11
<u>Background Water Quality</u>				
Ammonia	mg/L	summer	0.025	Mansfield 801;20 values,6<MDL, 2007-11
Ammonia	mg/L	winter	0.085	Mansfield 801;14 values,2<MDL, 2007-11
Arsenic	µg/L	annual	2.1	STORET; 5 values, 0<MDL, 2007
Barium	µg/L	annual	56.2	STORET; 5 values, 0<MDL, 2007
Bis(2-ethylhexyl)phthalate	µg/L	annual	0	No representative data available.
Boron	µg/L	annual	0	No representative data available.
Cadmium	µg/L	annual	0	STORET; 5 values, 5<MDL, 2007
Chlorine, total residual	µg/L	annual	0	No representative data available.
Chromium	µg/L	annual	0	STORET; 5 values, 5<MDL, 2007
Chromium ⁺⁶ (dissolved)	µg/L	annual	0	No representative data available.
Copper	µg/L	annual	0	STORET; 5 values, 5<MDL, 2007
Cyanide, free	µg/L	annual	0	No representative data available
Fluoride	µg/L	annual	0	No representative data available.
Iron	µg/L	annual	725	STORET; 5 values, 0<MDL, 2007
Lead	µg/L	annual	0	STORET; 5 values, 5<MDL, 2007
Molybdenum	µg/L	annual	0	No representative data available.
Nickel	µg/L	annual	0	STORET; 5 values, 5<MDL, 2007
Phenol	µg/L	annual	0	STORET; 1 values, 1<MDL, 2007

Table 8. Instream Conditions and Discharger Flow

Parameter	Units/Outfall	Season	Value	Basis
Selenium	μg/L	annual	0	STORET; 5 values, 5<MDL, 2007
Silver	μg/L	annual	0	STORET; 5 values, 5<MDL, 2007
Thallium	μg/L	annual	0	No representative data available.
Zinc	μg/L	annual	0	STORET; 5 values, 5<MDL, 2007
<u>Discharger Flows (cfs)</u>				
<i>Mansfield WWTP</i>	001		18.57	Facility design flow
<i>AK Steel</i>	001		2.34	95 th percentile of monthly average flow rate
	002		0.659	95 th percentile of monthly average flow rate
	003		1.3	95 th percentile of monthly average flow rate
	004		0.124	95 th percentile of monthly average flow rate
	006		0.113	95 th percentile of monthly average flow rate

MDL = method detection limit

STORET = United States EPA water quality storage and retrieval database

USGS = United States Geological Survey

WWTP = wastewater treatment plant

Table 9. Summary of Effluent Limits to Maintain Applicable Water Quality Criteria

Parameter	Units	Outside Mixing Zone			Maximum Aquatic Life	Inside Mixing Zone Maximum
		Average				
		Human Health	Agri Supply	Aquatic Life		
<u>Outfall 001</u>						
Barium	µg/L	--	--	245	2100	4000
Chromium	µg/L	--	133	249. ^c	1890. ^c	4600
Copper	µg/L	1721. ^a	662. ^a	28. ^c	46. ^c	110
Fluoride	µg/L	--	2299	--	--	--
Lead	µg/L	--	132	33. ^b	608. ^c	7300
Silver	µg/L	--	--	1.3	10	20
Zinc ^b	µg/L	9138. ^a	33110. ^a	231. ^d	322. ^c	960
<u>Outfall 002</u>						
Silver	µg/L	--	--	1.3	10	20
<u>Outfall 003</u>						
Silver	µg/L	--	--	1.3	10	20
<u>Outfall 004</u>						
Cadmium	µg/L	--	75. ^a	1.6 ^d	19. ^c	32
Copper	µg/L	1721. ^a	662. ^a	28. ^c	46. ^c	110
Lead	µg/L	--	132	33. ^d	608. ^c	7300
Silver	µg/L	--	--	1.3	10	20
Zinc	µg/L	9138. ^a	33110. ^a	231. ^d	322. ^c	960
<u>Outfall 006</u>						
Barium	µg/L	--	--	249	2248	4000
Boron	mg/L	--	--	168.6 ^a	1360.0 ^a	65.0
Chromium	µg/L	--	133	249. ^c	1890. ^c	4600
Fluoride	µg/L	--	38870	--	--	--
Iron	µg/L	--	6295	--	--	--
Lead	µg/L	--	132	33. ^d	608. ^c	7300
Phenols	mg/L	284000 ^a	--	17.3 ^a	193.7 ^a	9.4

^a = Allocation must not exceed the Inside Mixing Zone Maximum.

^b = Parameter would not require a wasteload allocation (WLA) based on reasonable potential procedures - allocation requested for Best Available Technology considerations.

^c = WLA based on applicable dissolved metal translator.

^d = WLA based on the application of a biological threshold value.

Table 10. Parameter Assessment

Outfall 001

- Group 1: Due to a lack of criteria, the following parameters could not be evaluated at this time.
 Aluminum Magnesium Phosphorus
 Sulfate
- Group 2: PEQ < 25% of WQS or all data below minimum detection limit; WLA not required. No limit recommended, monitoring optional.
 Antimony Iron Molybdenum
 Nitrate+Nitrite Polychlorinated biphenyls Zinc
- Group 3: PEQmax < 50% of maximum PEL and PEQavg < 50% of average PEL. No limit recommended, monitoring optional.
 Copper
- Group 4: PEQmax > 50% but <100% of the maximum PEL or PEQavg > 50% but < 100% of the average PEL. Monitoring is appropriate.
 Chromium Lead
- Group 5: Maximum PEQ > 100% of the maximum PEL or average PEQ > 100% of the average PEL, or either the average or maximum PEQ is between 75 and 100% of the PEL and certain conditions that increase the risk to the environment are present. Limit recommended.

Limits to Protect Numeric Water Quality Criteria

Parameter	Units	Applicable Period	<u>Recommended Effluent Limits</u>	
			Average	Maximum
Barium	µg/L	annual	245	2100
Fluoride	µg/L	annual	2299	--
Silver	µg/L	annual	1.3	10

Table 10. Parameter Assessment

Group 1:	Due to a lack of criteria, the following parameters could not be evaluated at this time.		
	Aluminum	Magnesium	Manganese
	Sulfate		
Group 2:	PEQ < 25% of WQS or all data below minimum detection limit; WLA not required. No limit recommended, monitoring optional.		
	Cadmium	Copper	Molybdenum
	Nickel	Nitrate+Nitrite	Zinc
Group 3:	PEQmax < 50% of maximum PEL and PEQavg < 50% of average PEL. No limit recommended, monitoring optional.		
	Boron	Fluoride	Iron
	Phenols		
Group 4:	PEQmax > 50% but <100% of the maximum PEL or PEQavg > 50% but < 100% of the average PEL. Monitoring is appropriate.		
	Chromium	Lead	
Group 5:	Maximum PEQ > 100% of the maximum PEL or average PEQ > 100% of the average PEL, or either the average or maximum PEQ is between 75 and 100% of the PEL and certain conditions that increase the risk to the environment are present. Limit recommended.		

Limits to Protect Numeric Water Quality Criteria

Parameter	Units	Applicable Period	<u>Recommended Effluent Limits</u>	
			Average	Maximum
Barium	µg/L	annual	249	2248

PEL = preliminary effluent limit
 PEQ = projected effluent quality
 WLA = wasteload allocation
 WQS = water quality standards

Table 11. Final Effluent Limits and Monitoring Requirements

Parameter	Units	Concentration		Loading (kg/day) ^a		Basis ^b
		30 Day Average	Daily Maximum	30 Day Average	Daily Maximum	
<u>Outfall 001</u>						
Flow	MGD	----- Monitor -----				M ^c
Temperature	°C	----- Monitor -----				M ^c
Total Suspended Solids	mg/L	--	--	64.6	138.5	ABS/FEG
Oil and Grease	mg/L	10 maximum		31.0	36.5	ABS/FEG/WQS
pH	S.U.	6.5 - 9.0		--	--	WQS
Copper	µg/L	----- Monitor -----				EP
Lead	µg/L	33.0	608	0.057	0.171	FEG/WLA
Silver	µg/L	----- Monitor -----				EP
Barium	µg/L	----- Monitor -----				WLA/RP
Fluoride	mg/L	----- Monitor -----				WLA/RP
Chromium	µg/L	----- Monitor -----				WLA/RP
Mercury	ng/L	----- Monitor -----				BPJ
Zinc	µg/L	231	322	0.085	0.257	FEG/WLA
Whole Effluent Toxicity						
Chronic, <i>Ceriodaphnia dubia</i>	TU _c	----- Monitor -----				WET
Acute, <i>Ceriodaphnia dubia</i>	TU _a	----- Monitor -----				WET
<u>Outfall 002</u>						
Flow	MGD	----- Monitor -----				M ^c
Total Suspended Solids	mg/L	----- Monitor -----				M ^c
Oil and Grease	mg/L	10 maximum		--	--	WQS
pH	S.U.	6.5 - 9.0		--	--	WQS
Copper	µg/L	----- Monitor -----				EP
Silver	µg/L	----- Monitor -----				EP
Cadmium	µg/L	----- Monitor -----				BPJ
Zinc	µg/L	----- Monitor -----				BPJ
<u>Outfall 003</u>						
Flow	MGD	----- Monitor -----				M ^c
Total Suspended Solids	mg/L	----- Monitor -----				M ^c
Oil and Grease	mg/L	10 maximum		--	--	WQS
pH	S.U.	6.5 - 9.0		--	--	WQS
Copper	µg/L	----- Monitor -----				EP
Silver	µg/L	----- Monitor -----				EP
Cadmium	µg/L	----- Monitor -----				BPJ
Zinc	µg/L	----- Monitor -----				BPJ
Whole Effluent Toxicity						
Chronic, <i>Ceriodaphnia dubia</i>	TU _c	----- Monitor -----				WET

Acute, <i>Ceriodaphnia dubia</i>	TU _a	----- Monitor -----			WET
<u>Outfall 006</u>					
Flow	MGD	----- Monitor -----			M ^c
Total Suspended Solids	mg/L	----- Monitor -----			M ^c
Oil and Grease	mg/L	10 maximum	--	--	WQS
pH	S.U.	6.5 - 9.0	--	--	WQS
Nickel	µg/L	----- Monitor -----			EP
Zinc	µg/L	----- Monitor -----			EP
Cadmium	µg/L	----- Monitor -----			EP
Lead	µg/L	----- Monitor -----			EP/RP
Chromium	µg/L	----- Monitor -----			EP/RP
Copper	µg/L	----- Monitor -----			EP
Molybdenum	µg/L	----- Monitor -----			EP
Manganese	µg/L	----- Monitor -----			EP
Barium	µg/L	----- Monitor -----			WLA/RP
Mercury	ng/L	----- Monitor -----			BPJ
Whole Effluent Toxicity					
Chronic, <i>Ceriodaphnia dubia</i>	TU _c	----- Monitor -----			WET
Acute, <i>Ceriodaphnia dubia</i>	TU _a	----- Monitor -----			WET

^a Effluent loadings based on average design discharge flow (MGD):

- 001 – 0.894
- 002 – 0.084
- 003 – 0.373
- 006 – 0.023

^b Definitions:

- ABS** = Antibacksliding Rule (OAC 3745-33-05(E) and 40 CFR Part 122.44(l))
- BCT** = Best Conventional Technology, 40 CFR Part 420.77(c)(1) (Hot Forming Subcategory)
- BPJ** = Best Professional Judgment
- EP** = Existing Permit
- FEGL** = Federal Effluent Guidelines, 40 CFR Part 420, Iron and Steel Manufacturing Point Source, Subpart F - BCT and Subpart G - NSPS
- M** = Best engineering judgment of Permit Guidance 2: Determination of Sampling Frequency Formula for Industrial Waste Discharges
- NSPS** = New Source Performance Standards, 40 CFR Part 420.64 (Continuous Casting Subcategory)
- RP** = Reasonable Potential for requiring water quality-based effluent limits and monitoring requirements in NPDES permits (3745-33-07(A))
- PD** = Plant Design
- WET** = Whole Effluent Toxicity (OAC 3745-33-07(B))
- WLA** = Wasteload Allocation procedures (OAC 3745-2)
- 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.

^d 7 day average limit.

Attachment 1. Federal Effluent Guideline Calculations for Outfall 001

<i>Parameter</i>	<i>Continuous Caster</i>					<i>Hot Strip Mill</i>				
	<i>FEG - 40 CFR 420.64</i>		<i>Production tons/day:</i>	<i>Loading kg/day</i>		<i>FEG - 40 CFR 420.77(c)(1)</i>		<i>Production tons/day:</i>	<i>Loading kg/day</i>	
	<i>kg/kg</i>	<i>kg/kg</i>		<i>30-day</i>	<i>Daily</i>	<i>kg/kg</i>	<i>kg/kg</i>		<i>30-day</i>	<i>Daily</i>
	<i>30-day</i>	<i>Daily</i>	<i>2006</i>	<i>30-day</i>	<i>Daily</i>	<i>30-day</i>	<i>Daily</i>	<i>1994</i>	<i>30-day</i>	<i>Daily</i>
<i>TSS</i>	0.00261	0.0073		4.754	13.297	0.16	0.427		289.688	773.106
<i>O&G</i>	0.00104	0.00313		1.894	5.701	NA	0.107		NA	193.729
<i>Lead</i>	0.0000313	0.0000939		0.057	0.171	NA	NA		NA	NA
<i>Zinc</i>	0.0000469	0.000141		0.085	0.257	NA	NA		NA	NA

NA = not applicable



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

Matthew S. Montag, Manager
AK Steel Corporation – Mansfield Works
Environmental Affairs
913 Bowman Street
Mansfield, Ohio 44901

RE: Comments Submitted for the AK
Steel Corporation – Mansfield Works
NPDES Permit - # 2ID00003*JD

Dear Mr. Montag:

I am writing to you in response to comments which you submitted on behalf of AK Steel Corporation regarding the NPDES permit renewal for the Mansfield Works (permit no. 2ID00003*JD). Ohio EPA has received your comments in a letter dated November 30, 2012. Your comments are paraphrased below in *italics*, followed by our response.

Comment #1: Outfall 001 Lead and Zinc Effluent Limits. *“When wastewaters from hot forming operations are co-treated with continuous casting wastewaters, or other wastewaters limited for lead and zinc under the ELGs, NPDES permitting authorities, including Ohio EPA, typically include lead and zinc limits for the hot forming operations of a BPJ basis. This is done to account for the substantial flow and potential lead and zinc loadings from the hot forming operations. AK Steel requests that this approach be applied to the Mansfield Works...Without the BPJ loadings for the hot strip mill, it is unlikely that AK Steel would be able to achieve 100% compliance with the effluent limits for lead and zinc...When considering the properly calculated technology-based effluent limits at Outfall 001 described above, only the water-quality based monthly average draft permit limit for lead is more stringent than the technology-based limits...Considering the above information, AK Steel requests no water quality based effluent limits for zinc and no daily maximum water quality based effluent for lead.”*

We have re-evaluated the lead and zinc limits based on the BPJ loading information. We agree that adding the loading from the hot strip mill is appropriate. Based on the recalculated loadings, we will remove the concentration limits for zinc but the average and maximum concentration limits for lead will remain in the permit.

Comment #2: Outfall 001 Chromium Monitoring. *“The draft permit contains a monitoring requirement for chromium at Outfall 001...The sampling result contained in the NPDES permit renewal application was 17 ug/l. The most stringent water quality criterion is the Outside the Mixing Zone*

Average criterion for protection of agricultural uses of 100 ug/l...AK Steel believes that this monitoring result does not warrant further monitoring over the next permit term and requests that the requirement for chromium be removed from the renewal NPDES permit."

The sampling result contained in the NPDES permit renewal application placed this parameter in Group 4. Monitoring is required for parameters that fall into this group. The PEQs were recalculated based on the sampling information provided by AK Steel in the comment letter. The revised PEQs are below the 50% threshold to require monitoring. We will remove the monitoring as requested.

Comment #3: **Outfalls 002, 003, and 004: General Comment on Development of Preliminary Water Quality Based Effluent Limits.** *"AK Steel objects to general manner in which Ohio EPA conducted its water quality assessment for Outfalls 002, 003, and 004. Outfalls 002 and 003 contain only storm water and low volume ground water discharges...Because the discharge flow from Outfall 002 and 003 is significantly influenced by storm water, the simultaneous occurrence of the outfall flow rates chosen by Ohio EPA and the Rocky Fork Q1,10 or Q7,10 is virtually impossible."*

The wasteload allocation was completed in accordance with Ohio EPA published guidance.

Comment #4: **Outfall 002 and 003 Cadmium Monitoring.** *"The draft permit contains monitoring requirements for cadmium at Outfalls 002 and 003. Pages 13 and 14 of the Fact Sheet state that cadmium monitoring is required at Outfalls 002 and 003 because cadmium was a Group 4 pollutant for Outfall 004 and that the Outfall 004 flow has been diverted to Outfalls 002 and 003. Had a more reasonable combination of outfall and receiving stream flow rate been used for water quality assessments, cadmium would not be placed into Group 4...Cadmium was not detected in samples collected at Outfalls 002 and 003 for the NPDES permit renewal application. Considering this information, AK Steel requests that monitoring for cadmium not be included in the renewal permit."*

Cadmium monitoring has been proposed at a minimum sampling frequency in order to ensure that this will not have the potential to contribute to water quality exceedances from Outfalls 002 and 003. Cadmium monitoring at these outfalls will remain in the permit.

Comment #5: **Outfalls 002 and 003 Silver Monitoring.** *"The draft permit contains monitoring requirements for silver at Outfalls 002 and 003...Silver is not used as part of the production process and any low-level concentrations in the discharge, if present, are beyond the reasonable control of Mansfield Works. AK Steel has monitored for silver over the past two permit terms. When considering reasonable combinations of outfall and receiving stream flow, the discharges pose no reasonable potential to cause or contribute to an exceedance of a water quality standard. Considering this information, AK Steel requests that silver monitoring be removed from the renewal permit for Outfalls 002 and 003."*

This parameter was placed in Group 5, which requires limits, based on the available data from January 2007 through December 2011. Using best engineering judgment, this parameter was proposed to be monitoring only. At AK Steel's request, we reviewed the data up through November 2012, which is the most recent data available. The last detections of silver at both outfalls occurred in August 2007, which is over five years ago. Based on this information, we agree to remove silver monitoring from both outfalls.

Comment #6: **Outfall 003 Toxicity Monitoring.** *"The draft permit contains monitoring requirements for acute and chronic toxicity at Outfall 003...Outfall 003 contains only storm water and low-volume ground water discharges. No process waters are discharged from Outfall 003, and there is no basis to suspect significant levels of toxicity in the discharge...If a more reasonable combination of effluent and receiving water flow is used for the water quality assessment, the "Allowable Effluent Toxicity" value would be significantly higher. AK Steel also notes that toxicity testing is not a requirement of Ohio EPA's General Industrial Storm Water NPDES permit, under which Outfall 003 could be covered based upon the general permit applicability requirements. AK Steel requests that the acute and chronic toxicity testing requirement be removed from the renewal permit."*

Toxicity limits from the previous permit have been removed. However, because the receiving water has still not attained its use designation, an annual acute and chronic toxicity testing requirement has been proposed to document that this outfall does not contribute to the toxicity of the receiving stream. Annual acute and chronic toxicity testing will remain in the permit.

Comment #7: **Outfall 006 Monitoring for Copper, Molybdenum, Manganese, Nickel, and Zinc.** *"The draft permit contains monitoring requirements for the metals listed above. AK Steel requests that these monitoring requirements be removed from the renewal permit. Monitoring data collected by AK Steel over the current permit term for all the metals above are either non-detect or are so far below the most stringent water quality criterion that further monitoring in the renewal permit is not warranted. AK Steel believes that the discharge has been adequately characterized for these metals."*

We agree to remove monitoring for copper and nickel, as well as cadmium (which was not included in the comment letter), as there have been no detections of these metals during the previous permit cycle. Molybdenum, manganese, and zinc continue to be detected; therefore, monitoring at a low frequency is appropriate and will remain in the permit.

Comment #8: **Outfall 006 Toxicity Testing.** *"The draft permit contains acute and chronic toxicity monitoring requirements for Outfall 006. AK Steel requests that these requirements be removed from the renewal permit. Since the draft permit was received, AK Steel conducted a chronic toxicity test, with determination of acute endpoints, on the Outfall 006 discharge as specified in the draft permit...Considering the information above and that the "Allowable Effluent Toxicity" value presented in the Fact Sheet is*

43.2 TUC for Outfall 006, AK Steel requests that the renewal permit contain no toxicity testing requirements for Outfall 006.”

The receiving water has still not attained its use designation; therefore, an annual acute and chronic toxicity testing requirement has been proposed to document that this outfall does not contribute to the toxicity of the receiving stream. Annual acute and chronic toxicity testing will remain in the permit.

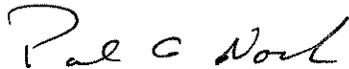
Comment #9: **Part II. K. Biomonitoring Requirements (pages 9 and 10).** “A few inconsistencies between pages 9 and 10 of the draft permit and the outfall pages of the draft permit were noted concerning toxicity testing:

- On pages 9 and 10, the draft permit references Outfalls 001 and 003 when discussing biomonitoring requirements, but does not reference Outfall 006...Whatever the case and whatever the final permit requires, the permit should be internally consistent.
- Page 10 of the draft permit references “completion of each semi-annual bioassay requirement.” Annual testing is required by the permit pages. AK Steel requests that page 10 be modified to indicate that annual testing is required.
- Page 9 states that toxicity testing shall begin within three months of the permit effective date while the permit pages state that the annual testing must be performed in June. AK Steel requests that the requirement to begin toxicity testing within three months of the permit effective date be removed from the permit.”

We will modify the permit as requested to ensure the biomonitoring language is internally consistent.

I hope that we have adequately addressed your concerns regarding the NPDES permit renewal. If you have further questions or concerns, please contact Walter Ariss at our Ohio EPA Northwest District Office at (419) 373-3070 or at Walter.Ariss@epa.ohio.gov.

Sincerely,



Paul G. Novak, P.E.
Manager, Permits and Compliance Section
Division of Surface Water

cc: Walter Ariss, NWDO, Ohio EPA
File 2ID00003