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February 14, 1997

Mr. Mark Enochs
Division of Surface Water
Ohio Environmental Protection Agency
1800 Watermark Dr.
Columbus OH 43215

Dear Mr. Enochs:

Re: AK Steel Corporation - Middletown Works
NPDES Permit Renewal

On behalf of AK Steel, please find enclosed two copies of a report titled ***Technical Support Document for Proposed NPDES Permit Effluent Limitations***, February 1997. This report sets out applicable technology-based effluent limitations for AK Steel internal outfalls derived from 40 CFR Parts 420 and 433, including application of the "water bubble" at §420.03 and modified effluent limitations previously granted to AK Steel pursuant to Section 301(g) of the Clean Water Act. The report also sets out proposed water quality-based effluent limitations for AK Steel external outfalls derived from Ohio water quality standards and Ohio EPA wasteload allocation and NPDES permitting policies. The results of our meeting on January 31, 1997 have been factored into development of the proposed water quality-based effluent limitations.

I understand that Pat Gallo from AK Steel will be sending to you separately water quality data for Dicks Creek.

We look forward to Ohio EPA's review of this report and we are available at your convenience to discuss comments or questions you may have.

Sincerely yours,

Gary A. Amendola, P.E.

Enclosures
cc: Pat Gallo, AK Steel

EXHIBIT 3

Technical Support Document
for
Proposed NPDES Permit Effluent Limitations

AK Steel Corporation - Middletown Works
Ohio EPA Permit No. 1ID00001*ED

February 1997

Prepared for

AK Steel Corporation
Middletown Works

Amendola Engineering, Inc.
Lakewood, Ohio

AKS-97-01-001

EXHIBIT 3

Technical Support Document
for
Proposed NPDES Permit Effluent Limitations

AK Steel Corporation - Middletown Works
Ohio EPA Permit No. 1ID00001*ED

Executive Summary

This report is a supplement to the NPDES permit application submitted to Ohio EPA by AK Steel Corporation on August 29, 1996, for its integrated steel mill located at Middletown, Ohio (Ohio EPA Permit No. 1ID00001*ED). The purpose of this report is to set out the basis for proposed technology-based effluent limitations applicable to the Middletown Works from 40 CFR Parts 420 and 433, including alternative technology-based effluent limitations developed pursuant to 40 CFR Part 420.03 (the steel industry *water bubble* rule); continuation of modified Section 301(g) effluent limitations for ammonia-N and phenols (4AAP) applicable to blast furnace and sintering operations; and, proposed water quality-based effluent limitations (WQBELs) for discharges to Dicks Creek and the Great Miami River developed in accordance with Ohio water quality standards and Ohio EPA NPDES permitting policies. The more stringent of the technology-based effluent limitations and WQBELs are proposed as NPDES permit effluent limitations.

Tables ES-1 through ES-6 present AK Steel's proposed effluent limitations and monitoring requirements for each internal and external outfall.

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Table ES-1

AK Steel Corporation - Middletown Works
Proposed NPDES Permit Effluent Limitations and Monitoring Requirements

Outfalls 011 and 001

Effluent Characteristic	Effluent Limitations				Monitoring Requirements	
	Concentration		Mass Loading (kg/day)		Measurement Frequency	Sample Type
	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum		
Outfall 011						
Flow mgd					Daily	24-Hr Total
Oil & Grease mg/l		10			Weekly	Grab
TR Lead ug/l					Weekly	Grab
TR Zinc ug/l					Weekly	Grab
Free Cyanide mg/l		0.092			Weekly	Grab
pH su	6.5 to 9.0 su				Weekly	Grab
Internal Outfall 001						
Flow mgd					Daily	Calculated
TSS mg/l			2,723	6,838	Weekly	Calculated
Oil & Grease mg/l			179	524	Weekly	Calculated
Total Lead ug/l			6.38	19.02	Weekly	Calculated
Total Zinc ug/l			6.64	24.47	Weekly	Calculated

Notes: 1. Compliance with the mass effluent limitations at Internal Outfall 001 shall be determined by the sum of the mass loadings determined for Internal Monitoring Stations 613 and 614.

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Table ES-2

AK Steel Corporation - Middletown Works
Proposed NPDES Permit Effluent Limitations and Monitoring Requirements

Internal Monitoring Stations 613 and 614

Effluent Characteristic	Effluent Limitations				Monitoring Requirements	
	Concentration		Mass Loading (kg/day)		Measurement Frequency	Sample Type
	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum		
Internal Monitoring Station 613						
Flow mgd					Daily	24-Hr Total
TSS mg/l					Weekly	24-Hr Comp
Oil & Grease mg/l					Weekly	Grab
Ammonia-N mg/l			205	410	Weekly	24-Hr Comp
Total Cyanide mg/l			9.9	18.8	Weekly	Grab
Phenols ug/l			0.90	1.80	Weekly	24-Hr Comp
Total Lead ug/l					Weekly	24-Hr Comp
Total Zinc ug/l					Weekly	24-Hr Comp
Internal Monitoring Station 614						
Flow mgd					Daily	24-Hr Total
TSS mg/l					Weekly	24-Hr Comp
Oil & Grease mg/l					Weekly	Grab
Total Lead ug/l					Weekly	24-Hr Comp
Total Zinc ug/l					Weekly	24-Hr Comp
Naphthalene ug/l				0.25	Annually	24-Hr Comp
Tetrachloro-ethylene ug/l				0.37	Annually	Grab

Notes: 1. Compliance with the mass effluent limitations at Internal Outfall 001 shall be determined by the sum of the mass loadings determined for Internal Monitoring Stations 613 and 614.

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Table ES-3

AK Steel Corporation - Middletown Works
Proposed NPDES Permit Effluent Limitations and Monitoring Requirements

Outfalls 002, 003 and Internal Monitoring Station 631

Effluent Characteristic	Effluent Limitations				Monitoring Requirements	
	Concentration		Mass Loading (kg/day)		Measurement Frequency	Sample Type
	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum		
Outfall 002 0.99 mgd						
Flow mgd					Daily	24-Hr Total
Oil & Grease mg/l		10			Weekly	Grab
Ammonia-N						
May - October			14.6	153	Weekly	24-Hr Comp
Nov. - April			31.7	188	Weekly	24-Hr Comp
TR Zinc					Weekly	24-Hr Comp
Free Cyanide mg/l			0.26	0.98	Weekly	Grab
pH su	6.5 to 9.0				Weekly	Grab
Outfall 003 1.27 mgd						
Flow mgd					Daily	24-Hr Total
Oil & Grease mg/l		10			Weekly	Grab
TR Zinc ug/l		450			Weekly	24-Hr Comp
pH su	6.5 to 9.0				Weekly	Grab
Internal Monitoring Station 631						
Flow mgd					Daily	24-Hr Total
TSS mg/l			400	1,264	Weekly	24-Hr Comp
Total Lead ug/l			1.00	3.75	Weekly	24-Hr Comp
Total Zinc ug/l			1.80	4.39	Weekly	24-Hr Comp

Note: 1. The Oil & Grease effluent limitation for Outfall 003 is a net concentration limit. The difference between the concentration measured at Station 1ID00001803 and the concentration measured at 1ID00001003 shall not exceed this level.

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Table ES-4

AK Steel Corporation - Middletown Works
Proposed NPDES Permit Effluent Limitations and Monitoring Requirements

Outfall 004, Internal Monitoring Stations 641 and 642

Effluent Characteristic	Effluent Limitations				Monitoring Requirements	
	Concentration		Mass Loading (kg/day)		Measurement Frequency	Sample Type
	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum		
Outfall 004	2.70 mgd					
Flow mgd					Daily	24-Hr Total
Oil & Grease mg/l		10			Weekly	Grab
TR Zinc ug/l		450			Weekly	24-Hr Comp
pH su	6.5 to 9.0				Weekly	Grab
Internal Monitoring Station 641						
Flow mgd					Daily	24-Hr Total
TSS mg/l			561	1,240	Weekly	24-Hr Comp
Oil & Grease mg/l			315	881	Weekly	Grab
TR Lead ug/l			1.63	4.31	Weekly	24-Hr Comp
TR Zinc ug/l			1.72	2.36	Weekly	24-Hr Comp
Naphthalene ug/l				1.27	Annually	24-Hr Comp
Tetrachloro-ethylene ug/l				1.91	Annually	Grab
Internal Monitoring Station 642		250 cfm	0.76 mgd			
Flow mgd					Daily	24-Hr Total
TSS mg/l	31	60			Weekly	24-Hr Comp
Oil & Grease mg/l	26	52			Weekly	Grab
T. Chromium ug/l	1,710	2,770			Weekly	24-Hr Comp
Total Lead ug/l	430	690			Weekly	24-Hr Comp
Total Nickel ug/l	2,380	3,980			Weekly	24-Hr comp
Total Zinc ug/l	1,480	2,610			Weekly	24-Hr Comp
TTO ug/l		2,130			Weekly	24-Hr Comp

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Table ES-5

AK Steel Corporation - Middletown Works
Proposed NPDES Permit Effluent Limitations and Monitoring Requirements

Outfalls 015 and 005

Effluent Characteristic	Effluent Limitations				Monitoring Requirements	
	Concentration		Mass Loading (kg/day)		Measurement Frequency	Sample Type
	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum		
Outfall 015	0.68 mgd					
Flow mgd					Daily	24-Hr Total
Oil & Grease mg/l		10			Weekly	Grab
TR Zinc ug/l		450			Weekly	24-Hr Comp
pH su	6.5 to 9.0				Weekly	Grab
Internal Outfall 005						
Flow mgd					Weekly	24-Hr Total
TSS mg/l			227	682	Weekly	24-Hr Comp
Oil & Grease mg/l			227	227	Weekly	Grab
Total Lead ug/l			0.23	0.68	Weekly	24-Hr Comp
Total Zinc ug/l			1.45	3.18	Weekly	24-Hr Comp

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Table ES-6

AK Steel Corporation - Middletown Works
Proposed NPDES Permit Effluent Limitations and Monitoring Requirements

Outfall 099

Effluent Characteristic		Effluent Limitations				Monitoring Requirements	
		Concentration		Mass Loading (kg/day)		Measurement Frequency	Sample Type
		30-Day Average	Daily Maximum	30-Day Average	Daily Maximum		
Outfall 099							
TR Zinc	ug/l	NA	NA	8.92	NA	Weekly	Calculated

Note: 1. Outfall 099 is an NPDES permit compliance point established for the purpose of implementing 30-day average WQBELs for Total Recoverable Zinc for AK Steel discharges to Dicks Creek.

2. Proposed effluent limitations for Total Recoverable Zinc are the sum of the 30-day average WQBELs for Outfalls 004, 015, 003 and 002. Effluent monitoring for Total Recoverable Zinc at these outfalls shall occur on the same days.

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AK Steel Corporation - Middletown Works
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AK Steel Corporation - Middletown Works
Ohio EPA Permit No. 1ID00001*ED

1.0 Introduction

1.1 AK Steel Corporation - Middletown Works

On August 29, 1996, AK Steel Corporation (AK Steel) filed a renewal NPDES permit application for its Middletown Works located in Middletown, Ohio. The Middletown Works is a fully integrated steel mill that produces coke, sinter, molten iron, and molten steel as intermediate products, and hot-rolled, cold-rolled and coated steels as final products for the automotive and other flat-rolled steel markets. Annual steelmaking capacity at the Middletown Works is about 3 million tons; however, the capacities of the hot strip mill and finishing mills exceed the steelmaking capacity by a substantial amount. Consequently, AK Steel routinely imports steel slabs for finishing from its Ashland, Kentucky mill and from outside sources.

Exclusive of Outfalls 006 and 008 which discharge only storm water, the Middletown Works has one outfall (Outfall 011) that discharges treated process wastewaters, non-contact cooling waters, well water, river water and storm water to the Great Miami River and four outfalls (Outfalls 002, 003 004 and 015) that discharge to Dicks Creek, a tributary of the Great Miami River. There are six internal NPDES permit monitoring stations for specific process water treatment facilities (Outfalls 613, 614, 631, 641, 642 and 005). Table 1-1 presents a list of the internal and external outfalls, long term average flow rates and the NPDES production rates for tributary steel mill operations.

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The Middletown Works has extensive process and non-contact cooling water treatment and recycle systems. The typical discharge of process and cooling water is less than 13.8 million gallons per day (mgd), or less than 1,700 gallons per ton of raw steel produced. This is the lowest water discharge rate of any integrated steel mill located in the United States. Total process and cooling water discharges at other integrated steel mills may range from five to more than ten times higher than those at the Middletown Works.

1.2 Clean Water Act Requirements

Section 402 of the Clean Water Act (CWA) establishes the National Pollutant Discharge Elimination System (NPDES) permit program. The NPDES permit program is designed to limit the discharge of pollutants into navigable waters of the United States through a combination of various requirements including technology-based and water quality-based effluent limitations. The NPDES permit program for Ohio was delegated to the Ohio Environmental Protection Agency by U.S. EPA. The CWA provides that the Administrator of U.S. EPA, or his designee, must concur with permits issued to major dischargers by delegated state agencies. The AK Steel - Middletown Works has been classified as a major industrial discharger by Ohio EPA and U.S. EPA.

Sections 301, 304, 306 and 307 of the CWA provide that U.S. EPA must promulgate national effluent limitations guidelines and standards of performance for major industrial categories for three classes of pollutants: (1) conventional pollutants (i.e., Total Suspended Solids, Oil and Grease, Biochemical Oxygen Demand, Fecal Coliform and pH); (2) toxic pollutants (e.g., toxic metals such as Chromium, Lead and Zinc; toxic organic pollutants such as Benzene, Benzo-a-pyrene, Naphthalene and Tetrachloroethylene); and, (3) non-conventional pollutants (all pollutants which are not conventional pollutants or toxic pollutants, e.g., Ammonia-N, Fluoride and Phenols (4AAP)).

Six types of effluent limitations guidelines and standards must be promulgated for each major industrial category:

Abbreviation	Effluent Limitation Guideline or Standard
BPT	Best Practicable Control Technology Currently Available
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
NSPS	New Source Performance Standards
PSES	Pretreatment Standards for Existing Sources
PSNS	Pretreatment Standards for New Sources

Pretreatment standards for existing and new sources are applicable to industrial facilities with wastewater discharges to publicly owned treatment works (POTWs), which generally are municipal wastewater treatment plants. Effluent limitations guidelines and new source performance standards are applicable to industrial facilities with direct discharges to navigable waters. AK Steel discharges pretreated coke plant process wastewaters to the City of Middletown POTW. All other process wastewaters are treated and discharged directly to Dicks Creek or the Great Miami River. Consequently, for purposes of the proposed NPDES permit, the first four types of effluent limitations guidelines and standards listed above are applicable to the AK Steel - Middletown Works.

Section 301 of the CWA, as amended by the Water Quality Act of 1987, requires that BPT effluent limitations were to have been achieved by July 1, 1977. BAT effluent limitations for toxic pollutants, BAT effluent limitations for non-conventional pollutants, and BCT effluent limitations for conventional pollutants must be achieved within three years from date of promulgation but no later than March 31, 1989. Section 402(a)(1) of the CWA provides that in the absence of promulgated effluent limitations guidelines or standards, the Administrator, or his designee, may establish effluent limitations for individual discharges on a case-by-case basis. U.S. EPA NPDES permit regulations provide that these limits may be established using "best professional judgement" (BPJ) taking into account proposed effluent limitations guidelines and standards and other relevant scientific, technical and economic information.

The effluent limitations guidelines and standards applicable to AK Steel are found at 40 CFR Part 420 for sintering, ironmaking, steelmaking, vacuum degassing, continuous casting, hot forming, acid pickling, cold rolling, alkaline cleaning and hot coating operations; and, at 40 CFR Part 433 for electroplating operations. 40 CFR Part 420 was promulgated in May 1982, and amended in May 1984. The compliance date for achieving the BAT effluent limitations contained in 40 CFR Part 420 was July 1, 1984. Cokemaking operations are also regulated by 40 CFR Part 420; however, because AK Steel disposes of its cokemaking process wastewaters by discharge to the City of Middletown sewerage system, cokemaking process wastewaters are not regulated under the NPDES permit program. 40 CFR Part 433 was promulgated on July 15, 1983; the compliance date was also July 1, 1984.

Section 304(l) of the CWA requires States to develop lists of impaired waters; identify point sources and amounts of pollutants they discharge that cause toxic impacts; and, develop an individual control strategy (ICS) for each point source. A principal purpose of Section 304(l) is to focus national surface water quality protection programs on areas with known water quality problems due entirely or substantially to point source discharges of "priority pollutants" listed in accordance with Section 307(a) of the CWA. In most cases where Section 304(l) applies, the NPDES permit for an affected discharger serves as the ICS. Dicks Creek and the Great Miami River were not identified as an impaired waters by the Ohio EPA. Consequently, an ICS is not required for the AK Steel - Middletown Works.

The applicable Ohio water quality standards for Dicks Creek and the Great Miami River are set out at Chapter 3745-1 of the Ohio Administrative Code. These standards became effective on July 1, 1992, and were approved by U.S. EPA Region 5.

Table 1-1

AK Steel Corporation - Middletown Works
NPDES Permit Outfalls and NPDES Permit Production Rates

NPDES Permit Outfalls (Typical Flow, mgd)				Process Operations and Sources of Effluent Discharge	NPDES Permit Production Rates (tons/day)
External Outfall		Internal Monitoring Station			
011	(8.38)			Non-contact cooling water, well water, river water, storm water, Outfall 613/614	
		613	(1.14)	Blast Furnace Sinter Plant	6,363 3,568
		614	(0.67)	#5 & #6 Cold Temper Mills #3 Zinc Grip H_2SO_4 Pickler #2 Terne Line HCl Pickler #2 Terne Line HCl Fume Scrubber (1) #2 Terne, #3 Zinc Grip Alkaline Cleaners #2 Terne, #3 Zinc Grip, #4 Aluminize Hot Coating Lines #2 Terne Hot Coating Fume Scrubber (1)	7,253 1,546 508 2,054 3,544
002	(0.99)			Non-contact cooling water, well water, river water, storm water	NA Indirect Discharge
003	(1.27)			Non-contact cooling water, well water river water, storm water, Outfall 631	
		631	(0.11)	BOF Steelmaking - Suppressed Combustion	8,330
004	(2.70)			Non-contact cooling water, well water, storm water, Outfalls 641 and 642	
		641	(2.13)	#3 Cold Mill (combination) #7 Cold Temper Mill - (da/ss) #4 & #5 HCl Picklers #4 & #5 HCl Picklers Fume Scrubbers (4) #2 EGL H_2SO_4 Pickler #2 EGL Alkaline Cleaning	9,034 7,322 12,862 2,400 2,400
		642	(0.43)	#2 Electrogalvanizing Line	2,400
015	(0.69)			Non-contact cooling water, well water, storm water, Outfall 005	
		005	(0.65)	Vacuum Degasser Continuous Caster Hot Strip Mill	5,221 7,583 16,438
006 **008**				Storm water; Note: storm water Outfall 007 has been eliminated.	

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2.0 Technology-Based Effluent Limitations

2.1 Technology-Based Effluent Limitations Derived from Categorical Effluent Limitations Guidelines and Standards and Best Professional Judgement (BPJ) Determination

Attachment A presents the derivation of technology-based effluent limitations from the applicable effluent limitations guidelines and standards for AK Steel Internal Monitoring Stations 613, 614, 631, 641 and 642, and for Internal Outfall 005. For each of the basic steelmaking and steel finishing operations, the NPDES production rates developed by AK Steel (see Table 1-1) were used in combination with the BPT, BAT or BCT effluent limitations guidelines and NSPS from 40 CFR Part 420, as appropriate, to compute the allowable discharges of the regulated pollutants. The applicable technology-based effluent limitations from 40 CFR Part 433 were used for Internal Monitoring Station 642. For purposes of the draft NPDES permit, Internal Monitoring Stations 613 and 614 are treated as one compliance point (Outfall 001) per conditions in the existing permit.

In all but two cases the effluent limitations guidelines were used to compute the applicable technology-based effluent limitations with no adjustments to take into account site-specific circumstances on a best professional judgement (BPJ) basis. AK Steel co-treats approximately 100 gallons per minute (gpm) of water treatment residuals and boiler wastewaters with process wastewaters from blast furnace and sintering operations at Internal Monitoring Station 613. The water treatment and boiler wastewaters are not regulated by §420.22/23 or §420.32/33. Consequently, BPJ effluent limitations were included for Total Suspended Solids (TSS), Oil & Grease, Total Lead and Total Zinc for these wastewaters. Effluent concentrations used by EPA to develop the sintering and ironmaking effluent limitations guidelines were used as the bases for the BPJ effluent limitations. Also, BAT effluent limitations for Total Lead and Total Zinc for the hot strip mill were derived from information presented in the Development Document for 40 CFR Part 420 (see Volume IV, page 345 and 47 FR 23266, May 27, 1982).

2.2 Alternative Technology-Based Effluent Limitations

40 CFR Part 420 at §420.03 provides for alternative technology-based effluent limitations through a regulatory flexibility mechanism developed specifically for the iron and steel industry. This regulatory flexibility mechanism is known generally as the *"water bubble"*. The water bubble provides for trading pollutant discharge limitations among two or more NPDES permit compliance monitoring stations provided certain conditions are met:

(1) Pollutant trading among a group of outfalls can only occur for like pollutants (e.g., TSS at one outfall for TSS at another outfall; TSS cannot be traded for Oil & Grease, Ammonia-N or Total Lead);

(2) The trades must involve a *"minimum net reduction amount"*. The minimum net reduction amount is defined at 15 per cent of the traded amount for TSS and Oil & Grease and 10 per cent for other pollutants;

(3) Any trades must comply with applicable water quality standards;

(4) Each outfall subject to pollutant trading for the effluent limitations guidelines must have fixed effluent limitations; and,

(5) Alternative, less stringent effluent limitations for cokemaking and cold forming process wastewaters are not allowed.

AK Steel is proposing several trades under the water bubble rule involving internal outfalls 001 and 005 and internal monitoring stations 631 and 641. These trades are set out in Tables 2-1 through 2-3 for TSS, Total Lead and Total Zinc, respectively. These trades meet the above conditions set out at §420.03. Trades are proposed only among like pollutants; the minimum net reduction amounts set out in the regulation are satisfied; each internal outfall and monitoring station has fixed effluent limitations; and, no alternative, less stringent effluent limitations are proposed for cokemaking or cold rolling operations.

Table 2-1

AK Steel Corporation - Middletown Works
Alternative Technology-Based Effluent Limitations for Total Suspended Solids
40 CFR Part 420.03
Outfalls 001, 631, 641 and 005

Effluent Limitations in kg/day

Outfall	Generally Applicable Effluent Limitations	Desired Effluent Limitations	Difference	Available to Bubble (85 per cent)	Transfer to Outfalls 001 and 631	Alternative Effluent Limitations
Monthly Average						
001	709				2,014	2,723
631	79	400			321	400
641	946	561	- 385	327		561
005	2,590	227	- 2,363	2,009		227
Total	4,324		- 2,748	2,336	2,335	3,911
Daily Maximum						
001	1,791				5,037	6,828
631	236				1,028	1,264
641	2,079	1,240	- 839	713		1,240
005	6,978	682	- 6,296	5,362		682
Total	11,084		- 7,135	6,065	6,065	10,014

Table 2-2

AK Steel Corporation - Middletown Works
Alternative Technology-Based Effluent Limitations for Total Lead
40 CFR Part 420.03
Outfalls 001, 631, 641 and 005

Effluent Limitations in kg/day

Outfall	Generally Applicable Effluent Limitations	Desired Effluent Limitations	Difference	Available to Bubble (90 per cent)	Transfer to Outfalls 001 and 631	Alternative Effluent Limitations
Monthly Average						
001	2.99				3.39	6.38
631	0.47				0.53	1.00
641	4.25	1.63	- 2.62	2.36		1.63
005	1.97	0.23	- 1.74	1.57		0.23
Total	9.68		- 4.36	3.92	3.92	9.22
Daily Maximum						
001	9.01				10.01	19.02
631	1.42				2.33	3.75
641	12.76	4.31	- 8.45	7.61		4.31
005	5.94	0.68	- 5.26	4.73		0.68
Total	29.13		- 13.71	12.34	12.34	27.76

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Table 2-3

AK Steel Corporation - Middletown Works
Alternative Technology-Based Effluent Limitations for Total Zinc
40 CFR Part 420.03
Outfalls 001, 631, 641 and 005

Effluent Limitations in kg/day

Outfall	Generally Applicable Effluent Limitations	Desired Effluent Limitations	Difference	Available to Bubble (90 per cent)	Transfer to Outfalls 001 and 631	Alternative Effluent Limitations
Monthly Average						
001	3.94				2.70	6.64
631	0.71				1.09	1.80
641	4.40	1.72	- 2.68	2.41		1.72
005	2.98	1.45	- 1.53	1.38		1.45
Total	12.03		- 4.21	3.79	3.79	11.61
Daily Maximum						
001	11.82				12.65	24.47
631	2.13				2.26	4.39
641	13.19	2.36	- 10.83	9.75		2.36
005	8.92	3.18	- 5.74	5.17		3.18
Total	36.06		- 16.57	14.92	14.92	34.40

2.3 AK Steel Section 301(g) Modified Effluent Limitations

AK Steel applied for, and was granted, modified effluent limitations provided for by federal NPDES permit regulations pursuant to Section 301(g) of the Clean Water Act for the currently effective NPDES permit for the Middletown Works. The modified limitations were granted by U.S. EPA and included in AK Steel NPDES permit No. 1ID00001*BD issued by Ohio EPA. The modified limits have been carried forward in each subsequent NPDES permit issued to AK Steel or its predecessor companies.

Ammonia-N and Phenols (4AAP) from sintering and blast furnace operations are non-conventional pollutants for purposes of the Clean Water Act and Section 301(g). Section 301(g) provides that modified effluent limitations for non-conventional pollutants from the generally applicable BAT effluent limitations may be granted provided the following conditions are met:

(1) The proposed modified effluent limitations (PMELs) will meet the categorical BPT effluent limitations or applicable water quality-based effluent limitations, whichever are more stringent;

(2) The proposed modified effluent limitations will not result in any additional requirements on other point or non-point sources;

(3) The proposed modified effluent limitations will not interfere with the attainment or maintenance of water quality which will protect public water supplies, aquatic life and recreational activities; and,

(4) The proposed modified effluent limitations will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity or teratogenicity), or synergistic propensities.

By its renewal NPDES permit application, AK Steel requested the modified limitations be continued in the next NPDES permit issued for the Middletown Works. AK Steel has reviewed the existing modified effluent limitations in the context of Ohio EPA's currently applicable water quality standards and procedures for conducting wasteload allocations and finds that the conditions under which the modified effluent limitations were granted remain applicable. A review of Ammonia-N discharges to the Middletown area segment of the Ohio River shows substantial available capacity well above the AK Steel Section 301(g) modified effluent limitations (see Section 3.2). Accordingly, AK Steel proposes to continue the Section 301(g) modified effluent limitations for Ammonia-N and Phenols (4AAP) in its next NPDES permit.

The modified PMELs will result in compliance with Ohio water quality standards and all Section 301(g) conditions listed above will be met. Consequently, there should be no issues associated with proposing approval of the modified PMELs subject to public review and comment on the proposed NPDES permit.

2.4 AK Steel Technology-Based Effluent Limitations

Tables 2-4 through 2-8 present comparisons of the generally applicable technology-based effluent limitations for the Middletown Works derived from 40 CFR Parts 420 and 433 and the proposed alternative technology-based effluent limitations based on application of §420.03 and AK Steel's Section 301(g) modified effluent limitations for Ammonia-N and Phenols (4AAP) applicable at Internal Monitoring Station 613.

Table 2-4

AK Steel Corporation - Middletown Works
Proposed Technology-Based Effluent Limitations

Internal Monitoring Station 613/614: Blast Furnace/Sinter Plant; Finishing Operations

Pollutant	Generally Applicable Effluent Limitations		Alternative Effluent Limitations Section 301(g) Limitations	
	30-Day Average (kg/day)	Daily Maximum (kg/day)	30-Day Average (kg/day)	Daily Maximum (kg/day)
Total Suspended Solids	709	1,791	2,723	6,838
Oil & Grease	179	524	179	524
Ammonia-N	33	99	205	410
Total Cyanide	9.9	18.8	9.9	18.8
Phenols (4AAP)	0.33	0.66	0.90	1.80
Total Lead	2.93	9.01	6.38	19.02
Total Zinc	3.94	11.82	6.64	24.47
Naphthalene	NA	0.25	NA	0.25
Tetrachloroethylene	NA	0.37	NA	0.37

Table 2-5

AK Steel Corporation - Middletown Works
Proposed Technology-Based Effluent Limitations

Internal Monitoring Station 631: Basic Oxygen Furnaces

Pollutant	Generally Applicable Effluent Limitations		Alternative Effluent Limitations	
	30-Day Average (kg/day)	Daily Maximum (kg/day)	30-Day Average (kg/day)	Daily Maximum (kg/day)
Total Suspended Solids	78.6	236	400	1,264
Total Lead	0.47	1.42	1.00	3.75
Total Zinc	0.71	2.13	1.80	4.39

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Table 2-6

AK Steel Corporation - Middletown Work
Proposed Technology-Based Effluent Limitations

Outfall 005: Continuous Caster, Vacuum Degasser, Hot Strip Mill

Pollutant	Generally Applicable Effluent Limitations		Alternative Effluent Limitations	
	30-Day Average (kg/day)	Daily Maximum (kg/day)	30-Day Average (kg/day)	Daily Maximum (kg/day)
Total Suspended Solids	2,590	6,978	227	682
Oil & Grease	622	1,867	227	227
Total Lead	1.97	5.94	0.23	0.68
Total Zinc	2.98	8.92	1.45	3.18

Table 2-7

AK Steel Corporation - Middletown Works
Proposed Technology-Based Effluent Limitations

Internal Monitoring Station 641: Steel Finishing Operations

Pollutant	Generally Applicable Effluent Limitations		Alternative Effluent Limitations	
	30-Day Average (kg/day)	Daily Maximum (kg/day)	30-Day Average (kg/day)	Daily Maximum (kg/day)
Total Suspended Solids	946	2,079	561	1,240
Oil & Grease	315	881	315	881
Total Lead	4.25	12.76	1.63	4.31
Total Zinc	4.40	13.19	1.72	2.36
Naphthalene	NA	1.27	NA	1.27
Tetrachloroethylene	NA	1.91	NA	1.91

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Table 2-8

AK Steel Corporation
Proposed Technology-Based Effluent Limitations

Internal Monitoring Station 642: Electroplating

Pollutant	Effluent Limitations Guidelines	
	30-Day Average (mg/L)	Daily Maximum (mg/L)
Total Suspended Solids	31	60
Oil & Grease	26	52
Total Chromium	1.71	2.77
Total Lead	0.43	0.69
Total Nickel	2.38	3.98
Total Zinc	1.48	2.61
Total Toxic Organics		2.13

Notes:
1. Typical process wastewater flow is expected to be 300 gpm (0.432 mgd).
2. Outfall 642 is the only significant source of Chromium and Nickel to Outfall 004. Cyanide and other metals limited by 40 CFR Part 433 (i.e., Cadmium, Copper, Silver) are not part of the process and are not present at significant levels.

3.0 Preliminary Water Quality-Based Effluent Limitations

Development of proposed water quality-based effluent limitations is a two step process. The first step is to develop *preliminary* WQBELs for each outfall based on application of Ohio water quality standards for pollutants known or suspected to be present in discharges from AK Steel at levels which may be significant from a water quality standpoint. The second step is to develop proposed *final* WQBELs based on assessments of *reasonable potential* as required by the NPDES permit regulations at 40 CFR Part 122.44(d). Development of preliminary WQBELs for each Outfall is described below. The assessments of *reasonable potential* are reviewed in Section 3.3.

3.1 Discharges to Dicks Creek - Outfalls 002, 003, 004, 015

Dicks Creek and its tributaries are designated for the following water quality uses for the indicated segments:

Segment	Use Designations
Dicks Creek	
› Cincinnati-Dayton Road to Yankee Road (RM 5.4 to 2.4)	MWH, AWS, IWS, PCR
› all other segments	WWH, AWS, IWS, PCR
North Branch of Dicks Creek	
› headwaters to Breiel Boulevard (RM 1.0)	WWH, AWS, IWS, PCR
› Breiel Boulevard to mouth	MWH, AWS, IWS, PCR
Shaker Creek and Millers Creek	WWH, AWS, IWS, PCR

where,

MWH	modified warm water habitat
WWH	warm water habitat
AWS	agricultural water supply
IWS	industrial water supply
PCR	primary contact recreation

Discrete segments of Dicks Creek and the North Branch of Dicks Creek are classified MWH because of extensive channel modifications which render the stream segments unsuitable for full warm water habitat uses. Figure 3-1 is a map of Dicks Creek showing the approximate locations of the above-listed segments and tributaries and the approximate locations of AK Steel Outfalls 002, 003, 004, 015 and 099.

All of the AK Steel outfalls discharge to segments of the North Branch of Dicks Creek and Dicks Creek that are classified as modified warm water habitat (MWH). For purposes of this analysis, the North Branch of Dicks Creek and the main stem of Dicks Creek upstream of AK Steel outfalls are considered to be intermittent, low flow streams with water quality design flows of zero cubic feet per second (cfs). The water quality design flow of Shaker Creek is reported to be 0.15 cfs by Ohio EPA. Because AK Steel discharges comprise essentially all of the flow in Dicks Creek during dry weather periods, these discharges must comply with applicable Ohio water quality standards absent consideration of background flows from upstream sources, other than the minor flow from Shaker Creek. The discharges from AK Steel are interactive. That is, discharges from upstream outfalls can affect WQBELs for downstream outfalls.

Outfall 004 is the most upstream outfall and discharges to the North Branch near its confluence with the main stem of Dicks Creek. Outfalls 015, 003 and 002 discharge directly to the main stem downstream of Shaker Creek and upstream of the Yankee Road bridge which is the downstream boundary of the MWH use designation and the upstream boundary of the warm water habitat (WWH) use designation.

Because AK Steel contributes essentially all of the flow to Dicks Creek during extended dry weather conditions, development of preliminary WQBELs for AK Steel outfalls discharging to Dicks Creek must proceed with Outfall 004, the most upstream outfall, and following with development of preliminary WQBELs for each subsequent downstream outfall (i.e., Outfalls 015, 003 and 002). Attachment C is a series of spreadsheet calculations showing

development of preliminary WQBELs for AK Steel outfalls discharging to Dicks Creek. Following is an outfall-by-outfall review.

Outfall 004

Outfall 004 contains the discharges from Internal Monitoring Stations 641 (steel finishing) and 642 (No. 2 EGL), non-contact cooling water, well water and storm water. The typical discharge flow is 2.70 mgd. This flow includes an increase in the discharge flow from the No. 2 EGL to 300 gpm to account for increased line speed and production. Following are assumptions made to develop the preliminary WQBELs for Outfall 004

- there is no upstream flow in the North Branch of Dicks Creek during extended dry weather periods;
- WQBELs for metals will be expressed as *total recoverable metals*; the water quality standards for metals will apply directly to the discharge from Outfall 004;
- effluent hardness is greater than 500 mg/l, and thus instream hardness during dry weather periods will also be greater than 500 mg/l. It is assumed that Ohio EPA will use 500 mg/l as a maximum default concentration for application of hardness-dependent total recoverable metals water quality criteria; and,
- Ohio EPA will use the water quality standard Oil & Grease concentration of 10 mg/l (daily maximum) as an NPDES permit effluent limitation.

The preliminary WQBELs derived as described above are compared in Table 3-1 with the sum of the applicable technology-based effluent limitations from Tables 2-7 and 2-8. Reference is made to Table 4-1 for the assessment of *reasonable potential*.

Outfall 015

Outfall 015 contains the discharge from Internal Outfall 005 (vacuum degasser, continuous caster, hot strip mill), a limited amount of non-contact cooling water, well water and storm water. The typical discharge flow is 0.69 mgd. Each of the assumptions listed above for Outfall 004 are applicable to Outfall 015, except that there is a minor amount of background flow

from Shaker Creek (0.15 cfs). The assimilative capacity for the Shaker Creek background flow was assigned to Outfall 015. Comparisons between the applicable technology-based effluent limitations and the preliminary WQBELs for Outfall 015 are set out in Table 3-2.

Outfall 003

Outfall 003 contains the discharge from Internal Monitoring Station 631 (approximately 0.11 mgd), non-contact cooling water, river water, well water and storm water. The typical discharge flow is approximately 1.27 mgd. All of the assumptions listed above for Outfall 015 are applicable to Outfall 003. The comparison between the applicable technology-based effluent limitations and the preliminary WQBELs are set out in Table 3-3.

Outfall 002

Outfall 002 discharges non-contact cooling water, river water and storm water. The typical discharge flow is approximately 0.99 mgd. Preliminary WQBELs for metals were calculated in the same manner and with the same assumptions used for Outfalls 015 and 003. Because Free Cyanide is not present in the discharge from Outfalls 004, 015 and 003, preliminary WQBELs for Free Cyanide are based on the total assimilative capacity of the stream (see Attachment B).

Preliminary WQBELs for Ammonia-N discharges to Dicks Creek from Outfall 002 are based on the stream assimilative capacity minus relatively low mass discharge contributions from Outfalls 004, 015 and 003, assuming Ammonia-N as a conservative substance. Also shown are alternative Ammonia-N effluent limitations for Outfall 002 that would apply if Dicks Creek were a warm water habitat, again assuming Ammonia-N as a conservative substance. The respective daily maximum outside the mixing zone WWH and Modified WWH Ammonia-N criteria are the same for both summer and winter conditions. Consequently, the preliminary daily maximum WQBELs are the identical. The same is true for the December to February 30-day average criteria and preliminary WQBELs. There is a difference only in preliminary WQBELs only for the March to November period where the WWH limitation would be 13.3 kg/day and the Modified WWH limitation would be 22.0 kg/day.

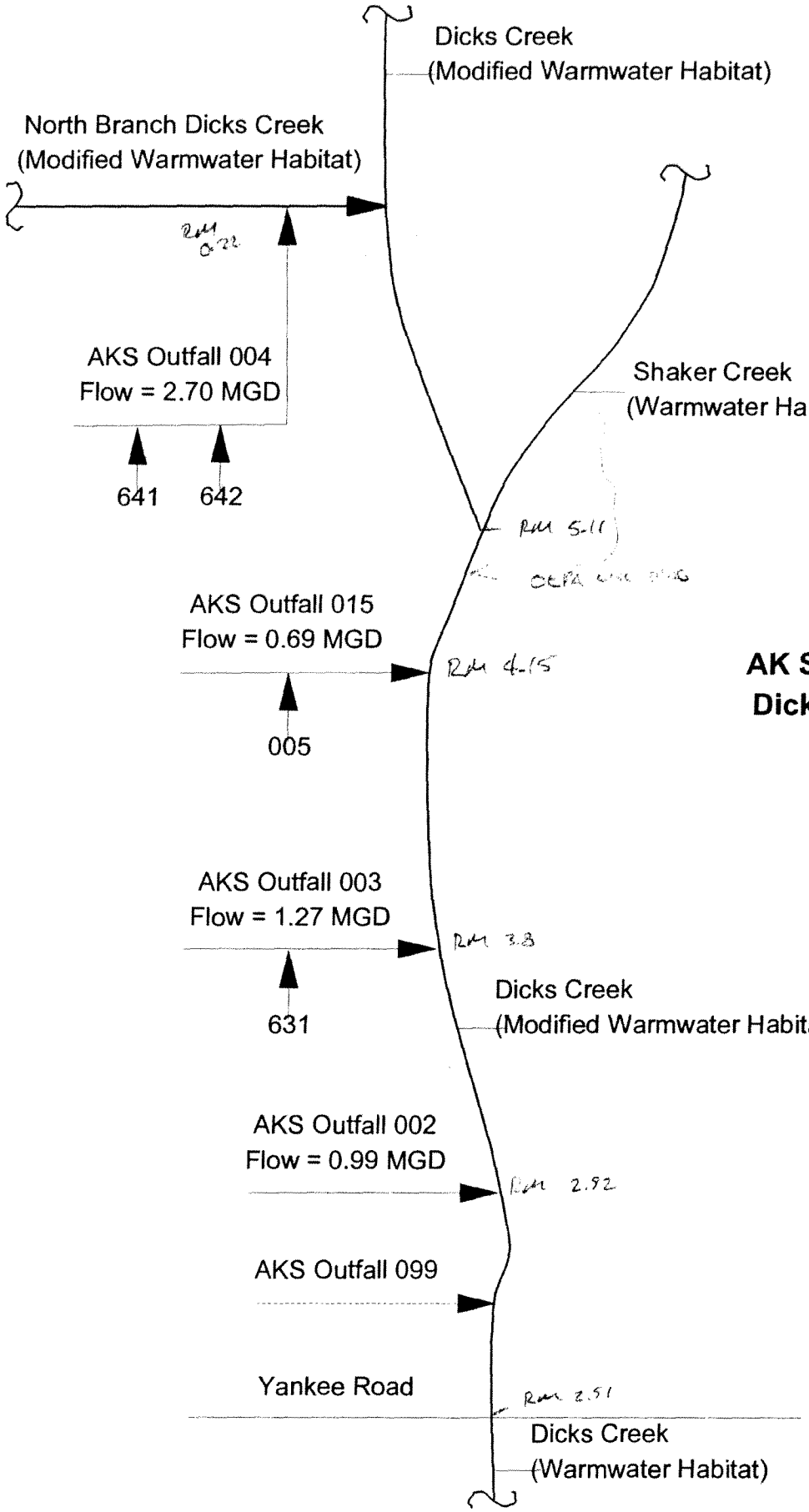

Figure 3-1
AK Steel Corporation
Dicks Creek Outfalls

EXHIBIT 3

Table 3-1

AK Steel Corporation - Middletown Works
Comparison of Technology-Based Effluent Limitations and Preliminary WQBELs

Outfall 004

Pollutant	Technology-Based Effluent Limitations		Preliminary WQBELs	
	30-Day Average (kg/day)	Daily Maximum (kg/day)	30-Day Average (kg/day)	Daily Maximum (kg/day)
Total Suspended Solids	612	1,338	NA	NA
Oil & Grease	357	966	NA	102
Ammonia-N March - November December - February	 NA NA	 NA NA	 12.3 16.4	 76.7 93.0
Chromium	2.79	4.53	7.87	68.5
Lead	2.33	5.44	0.55	10.22
Nickel	3.89	6.51	7.16	64.4
Zinc	4.14	6.63	4.19	4.60
Naphthalene	NA	1.27	0.45	1.63
Tetrachloroethylene	NA	1.91	0.75	5.52
Total Toxic Organics	NA	3.48	NA	NA

Notes:
1. Outfall 004 typical effluent flow is 2.70 mgd.
2. Technology-based effluent limitations are for *total metals*; preliminary WQBELs are for *total recoverable* metals.
3. Preliminary WQBELS are based on the assumption that Outfall 004 is the source of flow to the North Branch of Dicks Creek during extended dry weather periods.
4. Ohio EPA will use a maximum default hardness concentration of 500 mg/l for application of hardness-dependent total recoverable metals water quality criteria; and, WQS Oil & Grease concentration of 10 mg/l (daily maximum) as an NPDES permit effluent limitation.
5. Preliminary WQBELs for Ammonia-N are based on pH 8.0 and temperatures of 28°C and 20°C for summer and winter, respectively.

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Table 3-2

AK Steel Corporation - Middletown Works
Comparison of Technology-Based Effluent Limitations and Preliminary WQBELs

Outfall 015

Pollutant	Technology-Based Effluent Limitations		Preliminary WQBELs	
	30-Day Average (kg/day)	Daily Maximum (kg/day)	30-Day Average (kg/day)	Daily Maximum (kg/day)
Total Suspended Solids	227	682	NA	NA
Oil & Grease	227	227	NA	26.1
Ammonia-N				
March - November	NA	NA	3.1	19.6
December - February	NA	NA	4.2	23.8
Chromium	NA	NA	2.29	20.0
Lead	0.23	0.68	0.16	2.99
Nickel	NA	NA	2.09	18.8
Zinc	1.45	3.18	1.22	1.35

Notes:

1. Outfall 015 typical effluent flow is 0.69 mgd.
2. Technology-based effluent limitations are for *total metals* and are applicable at Internal Outfall 005; preliminary WQBELs are for *total recoverable* metals.
3. Preliminary WQBELS for Outfall 015 are based on the assumptions that Outfall 004 and Shaker Creek (0.15 cfs) are the only sources of flow to the North Branch of Dicks Creek and Dicks Creek, respectively, during extended dry weather periods; and, WQBELs at Outfall 004 include all of the allocations for metals based on the Outfall 004 discharge flow.
4. The in stream hardness concentration for application of hardness-dependent total recoverable metals water quality criteria is 500 mg/l; and, WQS Oil & Grease concentration of 10 mg/l (daily maximum) as an NPDES permit effluent limitation.
5. Preliminary WQBELs for Ammonia-N are based on pH 8.0 and temperatures of 28°C and 20°C for summer and winter, respectively.

Table 3-3

AK Steel Corporation - Middletown Works
Comparison of Technology-Based Effluent Limitations and Preliminary WQBELs

Outfall 003

Pollutant	Technology-Based Effluent Limitations		Preliminary WQBELs	
	30-Day Average (kg/day)	Daily Maximum (kg/day)	30-Day Average (kg/day)	Daily Maximum (kg/day)
Total Suspended Solids	400	1,264	NA	NA
Oil & Grease	NA	NA	NA	48.1
Ammonia-N				
March - November	NA	NA	5.8	36.0
December - February	NA	NA	7.7	43.7
Chromium	NA	NA	3.7	32.2
Lead	1.00	3.75	0.26	4.81
Nickel	NA	NA	3.37	30.29
Zinc	1.80	4.39	1.97	2.16

Notes:

1. Outfall 003 dry weather flow is 1.27 mgd.
2. Technology-based effluent limitations are for *total metals* and are applicable at Internal Outfall 005; preliminary WQBELs are for *total recoverable* metals.
3. Preliminary WQBELS for Outfall 003 are based on the assumption that Outfalls 004 and 015 and Shaker Creek are the only significant sources of flow to Dicks Creek during extended dry weather periods upstream of Outfall 003, and the full allocations for metals at Outfalls 004 and 015 will be assigned as WQBELs.
4. The in stream hardness concentration for application of hardness-dependent total recoverable metals water quality criteria is 500 mg/l; and, WQS Oil & Grease concentration of 10 mg/l (daily maximum) as an NPDES permit effluent limitation.
5. Preliminary WQBELs for Ammonia-N are based on pH 8.0 and temperatures of 28°C and 20°C for summer and winter, respectively.

Table 3-4

AK Steel Corporation - Middletown Works
Comparison of Technology-Based Effluent Limitations and Preliminary WQBELs

Outfall 002

Pollutant	Technology-Based Effluent Limitations		Preliminary WQBELs	
	30-Day Average (kg/day)	Daily Maximum (kg/day)	30-Day Average (kg/day)	Daily Maximum (kg/day)
Total Suspended Solids	NA	NA	NA	NA
Oil & Grease	NA	NA	NA	37.5
Ammonia-N (Modified WWH)				
March - November	NA	NA	22.0	153
December - February	NA	NA	31.7	188
Ammonia-N (WWH)				
March - November	NA	NA	13.3	153
December - February	NA	NA	31.7	188
Free Cyanide	NA	NA	0.26	0.98
Chromium	NA	NA	2.88	25.1
Lead	NA	NA	0.20	3.74
Nickel	NA	NA	2.62	23.6
Zinc	NA	NA	1.53	1.68

Notes:

1. Outfall 002 typical flow is 0.99 mgd.
2. Preliminary WQBELs are for *total recoverable* metals.
3. Preliminary WQBELS for Outfall 002 are based on the assumptions that Outfalls 004, 015 and 003 and Shaker Creek are the only significant sources of flow to Dicks Creek upstream of Outfall 002 during extended dry weather periods, and the full allocations for metals for those outfalls will be assigned as WQBELs.
4. The instream hardness concentration for application of hardness-dependent total recoverable metals water quality criteria is 500 mg/l; and, WQS Oil & Grease concentration of 10 mg/l (daily maximum) as an NPDES permit effluent limitation.
5. Preliminary WQBELs for Ammonia-N at Outfall 002 are based on pH 8.0 and temperatures of 28°C and 20°C for summer and winter, respectively; and, account for upstream discharges of 4.1 kg/day (monthly average) and 9.8 kg/day (daily maximum).

3.2 Discharge to the Great Miami River - Outfall 011

AK Steel discharges treated process wastewaters from Internal Monitoring Stations 613 (blast furnace, sinter plant) and 614 (steel finishing), non-contact cooling water, river water, well water and storm water to the Great Miami River through Outfall 011. The average dry weather discharge is approximately 8.4 mgd. The current NPDES permit established Internal Outfall 001 as a compliance monitoring point for the sum of the discharges from Internal Monitoring Stations 613 and 614. Figure 3-2 is a simplified schematic diagram of the configuration of Internal Monitoring Stations and other sources of water to Outfall 011.

The designated water quality uses of the Great Miami River at Middletown are WWH, AWS, IWS and PCR. In previous Ohio EPA waste load allocations, the Great Miami River was water quality-limited only for Ammonia-N in the reach of the river near AK Steel. Available data show the River is no longer water quality-limited for Ammonia-N, but there are still interactive discharges which require allocation (see Section 3.2). Consequently, WQBELs for Outfall 011 for all pollutants of concern except for Ammonia-N will be based on near-field impacts of the discharge.

Table 3-5 presents a simplified summary of Ohio EPA's prior wasteload allocation for Ammonia-N for the segment of the Great Miami River upstream of AK Steel to the Miller Brewing discharge (River Miles 51.0 to 43.7). This simplified summary is a steady-state analysis with Ammonia-N considered to be a conservative substance. Included are background water quality, point source discharge and tributary loadings of Ammonia-N for all known sources. This revised allocation is considered to be conservative from a water quality standpoint because instream nitrification was not considered (i.e., Ammonia-N was considered to be a conservative substance) and all dischargers were assumed to be discharging at their monthly average allocated loadings simultaneously. The results show that there is ample capacity upstream of the Middletown POTW to accommodate the Ohio EPA allocation. Although the results show that downstream of the Lesourdesville POTW there is no remaining assimilative

capacity, prior OHIO EPA modeling that considered in-stream nitrification shows the 30-day average criteria would be met with all dischargers discharging their maximum 30-day average allocation simultaneously, a highly unlikely occurrence.

Table 3-6 is a similar simplified steady-state analysis with the discharge from the Middletown POTW reduced to 196.8 kg/day (2.0 mg/l @ 26 mgd). An analysis of Middletown WWTP effluent monitoring data for the period January 1994 to July 1995 shows that the highest monthly average Ammonia-N loading was less than 80 kg/day (January 1994), well below the mass discharge shown in Table 3-6 of nearly 200 kg/day. Under this loading scenario which is more reflective of actual conditions, the in stream Ammonia-N criterion would be met by a large margin. These comparisons demonstrate there is ample assimilative capacity in the Great Miami River to continue the Section 301(g) modified effluent limitations for Ammonia-N for AK Steel in the next renewal NPDES permit.

Table 3-7 sets out comparisons of the sum of technology-based effluent limitations for Internal Monitoring Stations 613 and 614 (Outfall 001) and calculated preliminary WQBELs for pollutants of concern based on inside-the-mixing-zone (IMZM) water quality standards. The technology-based effluent limitations include the Section 301(g) modified effluent limitations for Ammonia-N and Phenols (4AAP) reviewed in Section 2.3.

Figure 3-2
AK Steel Corporation
Outfall 011 - Discharge to Great Miami River

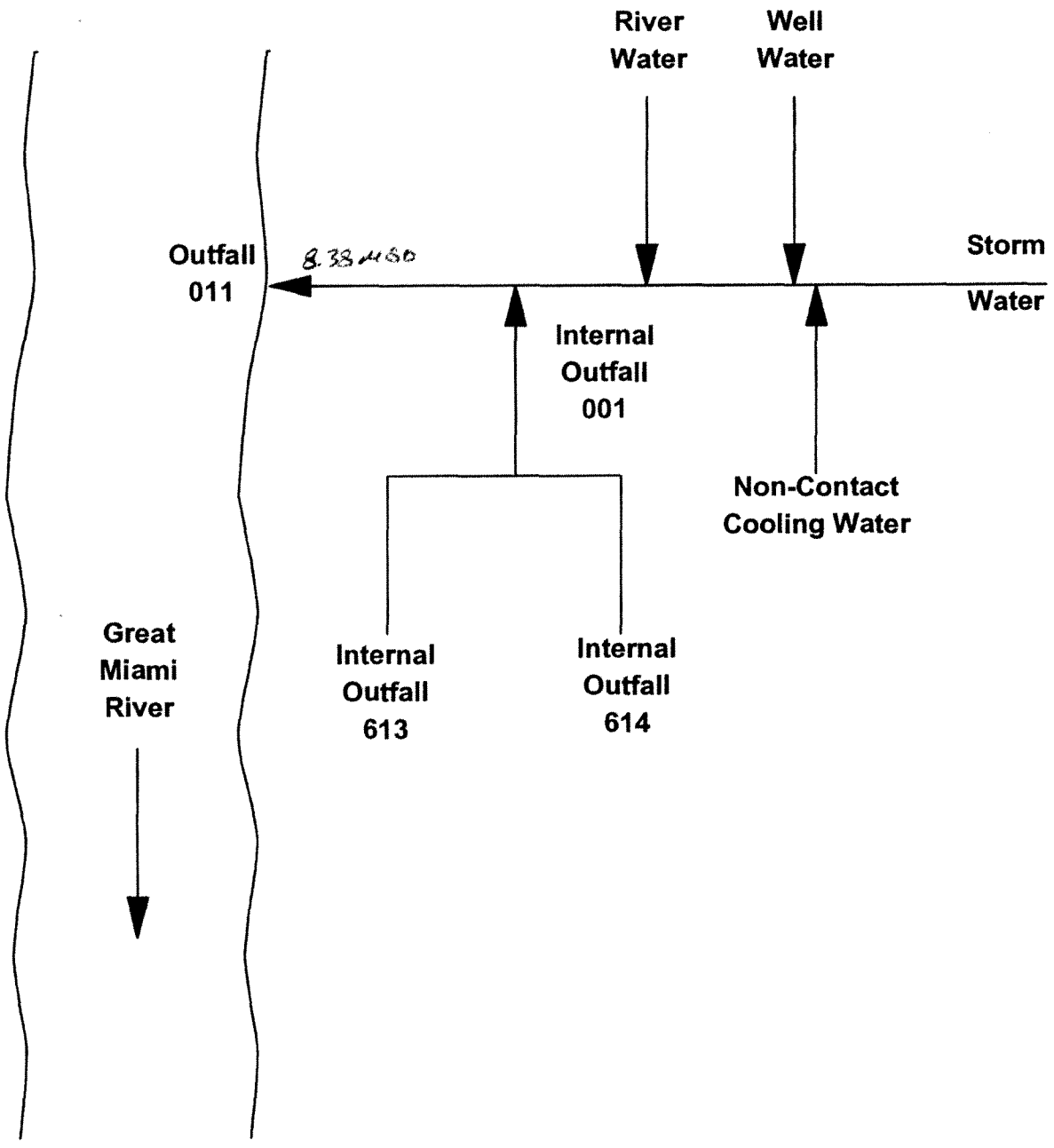

EXHIBIT 3

Table 3-5

Great Miami River near Middletown
Prior Ohio EPA Wasteload Allocation for Ammonia-N

Source	River Mile	Flow (cfs)	Cumulative Flow (cfs)	Allocated Ammonia-N Concentration (mg/l)	Allocated Ammonia-N Loading (kg/day)	Cumulative Ammonia Loading (kg/day)	Ammonia-N Assimilative Capacity (kg/day)	Ammonia-N Available Capacity (kg/day)
Upstream	51.0	448.27	448.27	0.06	65.8	65.8	932.2	866.4
AK Steel - Outfall 011	51.45	(4.81)	443.46		205.0	270.8	922.2	651.4
Bay West	49.8	5.72	449.18	6.00	84.0	354.8	934.1	579.3
Middletown WWTP	48.29	40.22	489.40	6.00	590.4	945.2	1017.7	72.6
Crystal Tissue	48.1	5.26	494.66	4.40	56.6	1001.8	1028.7	26.9
Dicks Creek	47.61	10.52	505.18	1.20	30.9	1032.7	1050.5	17.9
Gregory Creek	45.7	0.8	505.98	0.05	0.1	1032.8	1052.2	19.4
LeSourdesville WWTP	45.65	18.56	524.54	3.50	158.9	1191.7	1090.8	- 100.9
Miller Brewing	43.7	9.44	533.98	3.70	85.5	1277.1	1110.4	- 166.7

Notes:

1. Allocation by Ohio EPA based on summer Great Miami River temperature of 26.5°C and pH of 7.8, and allowable in-stream Ammonia-N concentration of 0.85 mg/l.

2. Steady-state analysis with Ammonia-N assumed to be a conservative substance.

Table 3-6

Great Miami River near Middletown
Revised Wasteload Allocation for Ammonia-N

Source	River Mile	Flow (cfs)	Cumulative Flow (cfs)	Allocated Ammonia-N Concentration (mg/l)	Allocated Ammonia-N Loading (kg/day)	Cumulative Ammonia Loading (kg/day)	Ammonia-N Assimilative Capacity (kg/day)	Ammonia-N Available Capacity (kg/day)
Upstream	51.0	448.27	448.27	0.06	65.8	65.8	932.2	866.4
AK Steel - Outfall 011	51.45	(4.81)	443.46		205.0	270.8	922.2	651.4
Bay West	49.8	5.72	449.18	6.00	84.0	354.8	934.1	579.3
Middletown WWTP	48.29	40.22	489.40	2.00	196.8	551.6	1017.7	466.2
Crystal Tissue	48.1	5.26	494.66	4.40	56.6	608.2	1028.7	420.5
Dicks Creek	47.61	10.52	505.18	1.20	30.9	639.1	1050.5	411.5
Gregory Creek	45.7	0.8	505.98	0.05	0.1	639.2	1052.2	413.0
LeSourdesville WWTP	45.65	18.56	524.54	3.50	158.9	798.1	1090.8	292.7
Miller Brewing	43.7	9.44	533.98	3.70	85.5	883.5	1110.4	226.9

Notes:

1. Allocation based on summer Great Miami River temperature of 26.5°C and pH of 7.8, and allowable in-stream Ammonia-N concentration of 0.85 mg/l.

2. Steady-state analysis with Ammonia-N assumed to be a conservative substance.

EXHIBIT 3

Table 3-7

AK Steel Corporation - Middletown Works
Comparison of Technology-Based Effluent Limitations and Preliminary WQBELs

Outfall 011

Pollutant	Technology-Based Effluent Limitations		Preliminary WQBELs	
	30-Day Average (kg/day)	Daily Maximum (kg/day)	30-Day Average (kg/day)	Daily Maximum (kg/day)
Total Suspended Solids	2,723	6,838	NA	NA
Oil & Grease	179	524	476	634
Ammonia-N March - November December - February	 205 205	 410 410	 205 205	 410 410
Total Cyanide	9.9	18.8	NA	NA
Free Cyanide	NA	NA	NA	2.92
Phenols (4AAP)	0.90	1.80	NA	NA
Lead	6.38	19.02	NA	41.16
Zinc	6.64	24.47	NA	21.25
Naphthalene	NA	0.25	NA	10.13
Tetrachloroethylene	NA	0.37	NA	34.89

Notes:
1. Outfall 011 typical flow is 8.38 mgd.
2. Technology-based effluent limitations are for *total metals* and are applicable at Internal Outfall 001; preliminary WQBELs are for *total recoverable* metals and are based on IMZM water quality standards.
3. The in-stream hardness concentration for application of hardness-dependent total recoverable metals water quality criteria is 350 mg/l. It is assumed Ohio EPA will use default Oil & Grease concentrations of 15 mg/l (monthly average) and 20 mg/l (daily maximum) as NPDES permit effluent limitations.

3.3 Analysis of *Reasonable Potential*

The NPDES permit regulations at 40 CFR Part 122.44(d) set out the requirements and obligations of permitting authorities to establish WQBELs in NPDES permits under appropriate circumstances. The regulations require that permitting authorities establish WQBELs it determines there is a *reasonable potential* for a discharge to cause or contribute to exceedances of state numerical or narrative water quality standards. When making this determination, the permitting authority must use procedures which account for the following:

- existing controls on point and non-point sources of pollution;
- the variability of the pollutant in the discharge;
- sensitivity of the designated species to toxicity testing, when evaluating whole effluent toxicity; and,
- where appropriate, dilution of the effluent in the receiving water.

Following is AK Steel's assessment of reasonable potential for Outfalls discharging to Dicks Creek and for Outfall 011 that discharges to the Great Miami River. Comparisons are made between the preliminary WQBELs derived for each outfall and AK Steel monitoring data for the period January 1995 to October 1996. This period is judged to be representative of current high production discharges. In a few instances data from a shorter period of record were used to assess reasonable potential because of structural or operational improvements instituted by AK Steel. These exceptions are noted on the tables that follow.

AK Steel's assessments of reasonable potential are based on comparisons of the preliminary 30-day average and daily maximum WQBELs with corresponding maximum 30-day average and daily maximum monitoring results recorded by AK Steel for the period of record. When the AK Steel monitoring data are greater than one-half of the corresponding preliminary

WQBELs, it was concluded there is reasonable potential for the discharge to cause or contribute to exceedances of water quality standards; otherwise, it was concluded there is no reasonable potential. This approach is similar to Ohio EPA's current protocol which calls for establishing WQBELs in NPDES permits when the 95th percentile of the monitoring results exceed 50 per cent of the preliminary WQBEL. The approach used by AK Steel is judged to be at least as conservative as the Ohio EPA protocol.

3.3.1 Discharges to Dicks Creek - Outfalls 004, 015, 003, 002

Tables 3-8 to 3-11 show the above-referenced comparisons for Outfalls 004, 015, 003 and 002, respectively. An outfall-by-outfall review is presented below.

Outfall 004

The results in Table 3-8 show there is reasonable potential for discharges from Outfall 004 of Ammonia-N (30-day average, March to November) and TR Zinc (30-day average and daily maximum). Reasonable potential was not demonstared for Oil & Grease, TR Chromium, TR Lead and TR Nickel. For TR Nickel, AK Steel evaluated data for the period January 1995 to November 1996 to assess reasonable potential, excluding one datum collected during April 1995. The excluded datum was collected during a short-term equipment malfunction and is not representative of normal operations.

As described in Section 4.0, AK Steel is proposing that discharges of Ammonia-N to Dicks Creek be limited at Outfall 002, which is the Outfall with the greatest potential for Ammonia-N discharges. Also, as described in Section 4.0 , AK Steel is proposing that daily maximum WQBELs for TR Zinc be established at each outfall to Dicks Creek and that the 30-day average limitations be applied at Outfall 099, which was estblished as a compliance point in the current NPDES permit. Consequently, AK Steel is proposing a WQBEL at Outfall 004 for TR Zinc (daily maximum). Because Ohio EPA policy calls for a 10 mg/l Oil & Grease daily

maximum effluent limitation for discharges to low-flow streams, AK Steel has assigned a 10 mg/l Oil & Grease limitation to Outfall 004.

Outfall 015

For Outfall 015, reasonable potential is demonstrated only for Oil & Grease. Reasonable potential was not demonstrated for Ammonia-N, TR Chromium, TR lead, TR Nickel or TR Zinc (see Table 3-9).

Outfall 003

The data in Table 3-10 show that reasonable Potential was demonstrated for Oil & Grease (daily maximum), Ammonia-N (30-day average, March to November), and TR Zinc (30-day average and daily maximum). Reasonable potential was not demonstrated for TR Lead, and, because there are no process sources of TR Chromium and TR Nickel, there is no reasonable potential for the Outfall 003 discharge for these pollutants. Note that one value for Ammonia-N was not considerd in this analysis because the discharge was associated with the Still coke plant, which was shut down in December 1995 and can no longer affect discharges from Outfall 003.

Outfall 002

The mass preliminary WQBELs for Ammonia-N for Outfall 002 are presented in Table 3-11 with AK Steel monitoring data for the period October 1995 to November 1996. This period was selected because AK Steel made changes to reduce the discharge of Ammonia-N to Outfall 004 prior to October 1995. Thus, the data presented are most representative of current conditions. The comparisons presented in Table 3-11 show there is no reasonable potential for Oil & Grease and Free Cyanide for Outfall 002. Reasonable potential is demonstrated only for the 30-day average Ammonia-N preliminary WQBEL for the WWH criteria.

3.3.2 Discharge to Great Miami River - Outfall 011

Table 3-12 sets out the mass preliminary WQBELs for Outfall 011 derived from IMZM water quality standards for Free Cyanide, TR Chromium, TR Lead, TR Zinc and Naphthalene and Tetrachloroethylene, and for Ammonia-N, from AK Steels Section 301(g) modified effluent limitations. Comparisons with AK Steel monitoring data for Ammonia-N (from internal Outfall 613) and Free Cyanide at Outfall 011 indicate reasonable potential. Comparison with AK Steel monitoring data for Lead and Zinc (at Internal Outfall 001) show no reasonable potential. Finally, the technogy-based effluent limitations or Naphthalene and Tetrachloroethylene are so low in relation to the corresponding preliminary WQBELs shows there is no reasonable potential for these compounds.

Table 3-8

AK Steel Corporation - Middletown Works
Assessment of *Reasonable Potential*

Outfall 004

Pollutant		Preliminary WQBELs		AK Steel Monitoring Data January 1995 - November 1996 Maximum Values Recorded		Reasonable Potential Demonstration Yes ● No □	
		30-Day Average	Daily Maximum	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum
Oil & Grease	mg/l	NA	10	NA	4	NA	□
Ammonia-N	mg/l						
March - November		1.2	7.5	0.70	0.92	●	□
December - February		1.6	9.1	0.75	0.89	□	□
TR Chromium	mg/l	0.77	6.70	ND	ND	□	□
TR Lead	mg/l	0.054	1.00	0.002	0.007	□	□
TR Nickel	mg/l	0.70	6.30	0.052	0.18	□	□
TR Zinc	mg/l	0.41	0.45	1.11	3.75	●	●

Note: 1. AK Steel monitoring data concentrations for Nickel estimated from internal Outfall 642 measured concentrations assuming negligible contribitions from other flows discharged through Outfall 004.

EXHIBIT 3

Table 3-9

AK Steel Corporation - Middletown Works
Assessment of *Reasonable Potential*

Outfall 015

Pollutant	Preliminary WQBELs		AK Steel Monitoring Data January 1995 - November 1996 Maximum Values Recorded		Reasonable Potential Demonstration Yes ● No ☐	
	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum
Oil & Grease mg/l	NA	10	NA	7	NA	●
Ammonia-N mg/l						
March - November	1.2	7.5	0.29	0.49	☐	☐
December - February	1.6	9.1	0.33	0.79	☐	☐
TR Chromium mg/l	0.77	6.70	ND	ND	☐	☐
TR Lead mg/l	0.054	1.00	0.006	0.025	☐	☐
TR Nickel mg/l	0.70	6.30	NA	NA	☐	☐
TR Zinc mg/l	0.41	0.45	0.092	0.20	☐	☐

EXHIBIT 3

Table 3-10

AK Steel Corporation - Middletown Works
Assessment of *Reasonable Potential*

Outfall 003

Pollutant		Preliminary WQBELs		AK Steel Monitoring Data January 1995 - November 1996 Maximum Values Recorded		Reasonable Potential Demonstration Yes ● No □	
		30-Day Average	Daily Maximum	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum
Oil & Grease	mg/l	NA	10	NA	5	NA	●
Ammonia-N	mg/l						
March - November		1.2	7.5	0.73	2.91	●	□
December - February		1.6	9.1	0.59	0.93	□	□
TR Chromium	mg/l	0.77	6.70	NA	NA	□	□
TR Lead	mg/l	0.054	1.00	0.025	0.13	□	□
TR Nickel	mg/l	0.70	6.30	NA	NA	□	□
TR Zinc	mg/l	0.41	0.45	0.38	0.47	●	●

Note: 1. AK Steel monitoring results for Outfall 003 exclude one data (22 mg/l) which is not representative of normal discharges.

EXHIBIT 3

Table 3-11

AK Steel Corporation - Middletown Works
Assessment of *Reasonable Potential*

Outfall 002

Pollutant	Preliminary WQBELs		AK Steel Monitoring Data January 1995 - November 1996 Maximum Values Recorded		Reasonable Potential Demonstration Yes ● No ☐	
	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum
Oil & Grease mg/l	NA	10	NA	4	NA	☐
Ammonia-N kg/day						
Modified Warmwater Habitat						
March - November	22.0	153	8.4	11.9	☐	☐
December - February	31.7	188	2.6	7.1	☐	☐
Warmwater Habitat						
March - November	13.3	153	8.4	11.9	●	☐
December - February	31.7	188	2.6	7.1	☐	☐
Free Cyanide kg/day	0.26	0.98	0.071	0.37	☐	☐

Note: 1. AK Steel ammonia-N discharges are from October 1995 to November 1996, after improvements were made to reduce Ammonia-N discharges to Outfall 002.

EXHIBIT 3

Table 3-12

AK Steel Corporation - Middletown Works
Assessment of *Reasonable Potential*

Outfall 011

Pollutant	Preliminary WQBELs		AK Steel Monitoring Data January 1995 - November 1996 Maximum Values Recorded		Reasonable Potential Demonstration Yes ● No ☐	
	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum
Oil & Grease mg/l	NA	NA	3	9	NA	NA
Ammonia-N kg/day						
March - November	205	410	256	342	●	●
December - February	205	410	256	342	●	●
Free Cyanide kg/day	NA	2.92	2.32	9.18	NA	●
TR Chromium kg/day	NA	68.4	NA	NA	NA	☐
TR Lead kg/day	NA	41.2	0.46	0.92	NA	☐
TR Zinc kg/day	NA	21.2	1.85	9.18	NA	☐
Naphthalene kg/day	NA	10.1	NA	0.25	NA	☐
Tetrachloroethylene kg/day	NA	34.9	NA	0.37	NA	☐

Notes: 1. AK Steel monitoring data for Ammonia-N from internal Outfall 613; and, monitoring data for Lead and Zinc from Outfall 001.

2. Values reported as AK Steel monitoring data for Naphthalene and Tetrachloroethylene are technology-based effluent limitations for internal Outfall 614.

EXHIBIT 3

4.0 Proposed NPDES Permit Effluent Limitations and Monitoring Requirements

Tables 4-1 through 4-8 set out AK Steel's proposed NPDES permit effluent limitations and monitoring requirements for each of the internal and external outfalls discharging to Dicks Creek and the Great Miami River. The effluent limitations are based on: (1) the determinations of applicable technology-based effluent limitations; (2) alterntive effluent limitations provided for in effluent guideline and NPDES permit regulations; (3) determination of preliminary water quality-based effluent limitations; and, (4) assessments of *reasonable potential.*

The following conventions were used to set proposed effluent limitations taking into account the reasonable potential determinations from Section 3.3 and Ohio EPA permitting policies:

- the proposed effluent limitations are structured such that technology-based effluent limitations apply at internal outfalls and water quality-based effluent limitations apply at external outfalls;
- for each external outfall discharging to Dicks Creek, a daily maximum Oil & Grease concentration limit of 10 mg/l is proposed;
- pH effluent limitations were set at 6.5 to 9.0 su for each external outfall. Because these limitations are more restrictive than the technology-based effluent limitations of 6.0 to 9.0 su, no pH effluent limitations are proposed for internal outfalls that are limited by technology-based effluent limitations;
- where reasonable potential was not demonstrated and there are abundant data available to demonstrate the discharge of the respective pollutants are low in concentration or typically not detected, no effluent limitations or monitoring requirements are proposed (e.g., TR Chromium, TR Lead and TR Nickel at external outfalls discharging to Dicks Creek); and,
- monitoring requirements are proposed at frequencies similar to that in the current NPDES permit, generally weekly for limited pollutants and pH, and daily for discharge flow.

There are two sets of proposed effluent limitations that warrant additional discussion: proposed effluent limitations for TR Zinc at Dicks Creek outfalls and the proposed 30-day average effluent limitation for Ammonia-N (March to November) for Outfall 002.

TR Zinc Effluent Limitations for Dicks Creek Outfalls

AK Steel is proposing a daily maximum effluent limitation of 450 ug/l for Outfalls 004, 015 and 003 based on the acute aquatic life water quality criterion and an instream Total Hardness concentration of 500 mg/l. No daily maximum effluent limitation is proposed for Outfall 002 because the discharge from Outfall 002 comprises non-contact cooling water, river water, well water and storm water. There is no reasonable potential for the discharge to cause or contribute to an exceednace of TR Zinc water quality standards. AK Steel is proposing a 30-day average TR Zinc effluent limitation of 8.92 kg/day at Outfall 099, which represents the sum of mass discharges from each of the Dicks Creek outfalls based on the chronic water quality criterion of 410 ug/l. This approach is protective of water quality because it is highly unlikely that each outfall would discharge 450 ug/l of TR Zinc simultaneously. Thus, AK Steel's compliance with the daily maximum effluent limitation will assure compliance with the acute criterion. Because the acute and chronic criteria for TR Zinc are nearly the same (450 ug/l and 410 ug/l, respectively), compliance with the acute criterion will ultimately assure compliance with the chronic criterion as well.

Ammonia-N Effluent Limitations for Outfall 002

Ohio's Modified WWH and WWH water quality criteria for Ammonia-N are the same for all but the chronic criteria applicable duing the March to November period. Consequently, the daily maximum preliminary WQBELs for Ammonia-N for Outfall 002 based on Modified WWH and WWH criteria are the same throughout the year, as are the respective 30-day average effluent limitations for the December to February period.

The 30-day average preliminary WQBELs for the March to November period are 22.0 kg/day and 13.3 kg/day based on Modified WWH and WWH criteria, respectively (see Table 3-11). Degradation of Ammonia-N in Dicks Creek from Outfall 002 to Yankee Road is estimated as follows:

$$C_{YR} = C_{DC002} * e^{-(k_3 * t)}$$

where,

C_{YR} = concentration of ammonia-N in Dicks Creek at Yankee Road
C_{DC002} = concentration of Ammonia-N in Dicks Creek at Outfall 002
k_3 = in stream reaction rate for ammonia-N (1.5 day^{-1})
t = travel time in days (0.061 days; ½ mile @ 0.5 ft/sec)

The value for k_3 was reported by the Ohio EPA for the Great Miami River in the most recent waste load allocation report. The travel time is an AK Steel estimate.

The ratio of C_{YR}/C_{DC002} is equivalent to the fraction of the initial Ammonia-N in Dicks Creek at Outfall 002 that is remaining at Yankee Road. In this case that fraction is 0.91. This means that approximately 91 per cent of the Ammonia-N present in Dicks Creek under dry weather summer conditions will remain in the stream at the Yankee Road bridge. Applying that fraction to the WWH preliminary WQBEL derived for Outfall 002 presented in Table 3-11 yields a revised WQBEL for Outfall 002 of 14.6 kg/day. AK Steel is proposing 14.6 kg/day as the 30-day average effluent limitation for Outfall 002. The limitation is proposed for the May to October period to correspond to Ohio EPA's NPDES permit convention for seasonal warm weather permit effluent limitations.

Table 4-1

AK Steel Corporation - Middletown Works
Proposed NPDES Permit Effluent Limitations and Monitoring Requirements

Outfalls 011 and 001

Effluent Characteristic	Effluent Limitations				Monitoring Requirements	
	Concentration		Mass Loading (kg/day)		Measurement Frequency	Sample Type
	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum		
Outfall 011						
Flow mgd					Daily	24-Hr Total
Oil & Grease mg/l		10			Weekly	Grab
TR Lead ug/l					Weekly	Grab
TR Zinc ug/l					Weekly	Grab
Free Cyanide mg/l		0.092			Weekly	Grab
pH su	6.5 to 9.0 su				Weekly	Grab
Internal Outfall 001						
Flow mgd					Daily	Calculated
TSS mg/l			2,723	6,838	Weekly	Calculated
Oil & Grease mg/l			179	524	Weekly	Calculated
Total Lead ug/l			6.38	19.02	Weekly	Calculated
Total Zinc ug/l			6.64	24.47	Weekly	Calculated

Notes: 1. Compliance with the mass effluent limitations at Internal Outfall 001 shall be determined by the sum of the mass loadings determined for Internal Monitoring Stations 613 and 614.

EXHIBIT 3

Table 4-2

AK Steel Corporation - Middletown Works
Proposed NPDES Permit Effluent Limitations and Monitoring Requirements

Internal Monitoring Stations 613 and 614

Effluent Characteristic	Effluent Limitations				Monitoring Requirements	
	Concentration		Mass Loading (kg/day)		Measurement Frequency	Sample Type
	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum		
Internal Monitoring Station 613						
Flow mgd					Daily	24-Hr Total
TSS mg/l					Weekly	24-Hr Comp
Oil & Grease mg/l					Weekly	Grab
Ammonia-N mg/l			205	410	Weekly	24-Hr Comp
Total Cyanide mg/l			9.9	18.8	Weekly	Grab
Phenols ug/l			0.90	1.80	Weekly	24-Hr Comp
Total Lead ug/l					Weekly	24-Hr Comp
Total Zinc ug/l					Weekly	24-Hr Comp
Internal Monitoring Station 614						
Flow mgd					Daily	24-Hr Total
TSS mg/l					Weekly	24-Hr Comp
Oil & Grease mg/l					Weekly	Grab
Total Lead ug/l					Weekly	24-Hr Comp
Total Zinc ug/l					Weekly	24-Hr Comp
Naphthalene ug/l				0.25	Annually	24-Hr Comp
Tetrachloro-ethylene ug/l				0.37	Annually	Grab

Notes: 1. Compliance with the mass effluent limitations at Internal Outfall 001 shall be determined by the sum of the mass loadings determined for Internal Monitoring Stations 613 and 614.

EXHIBIT 3

Table 4-3

AK Steel Corporation - Middletown Works
Proposed NPDES Permit Effluent Limitations and Monitoring Requirements

Outfalls 002, 003 and Internal Monitoring Station 631

Effluent Characteristic	Effluent Limitations				Monitoring Requirements	
	Concentration		Mass Loading (kg/day)		Measurement Frequency	Sample Type
	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum		
Outfall 002						
Flow mgd					Daily	24-Hr Total
Oil & Grease mg/l		10			Weekly	Grab
Ammonia-N May - October Nov. - April			 14.6 31.7	 153 188	 Weekly Weekly	 24-Hr Comp 24-Hr Comp
TR Zinc					Weekly	24-Hr Comp
Free Cyanide mg/l			0.26	0.98	Weekly	Grab
pH su	6.5 to 9.0				Weekly	Grab
Outfall 003						
Flow mgd					Daily	24-Hr Total
Oil & Grease mg/l		10			Weekly	Grab
TR Zinc ug/l		450			Weekly	24-Hr Comp
pH su	6.5 to 9.0				Weekly	Grab
Internal Monitoring Station 631						
Flow mgd					Daily	24-Hr Total
TSS mg/l			400	1,264	Weekly	24-Hr Comp
Total Lead ug/l			1.00	3.75	Weekly	24-Hr Comp
Total Zinc ug/l			1.80	4.39	Weekly	24-Hr Comp

Note: 1. The Oil & Grease effluent limitation for Outfall 003 is a net concentration limit. The difference between the concentration measured at Station 1ID00001803 and the concentration measured at 1ID00001003 shall not exceed this level.

EXHIBIT 3

Table 4-4

AK Steel Corporation - Middletown Works
Proposed NPDES Permit Effluent Limitations and Monitoring Requirements

Outfall 004, Internal Monitoring Stations 641 and 642

Effluent Characteristic	Effluent Limitations				Monitoring Requirements	
	Concentration		Mass Loading (kg/day)		Measurement Frequency	Sample Type
	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum		
Outfall 004						
Flow mgd					Daily	**24-Hr Total**
Oil & Grease mg/l		10			Weekly	**Grab**
TR Zinc ug/l		450			Weekly	24-Hr Comp
pH su	6.5 to 9.0				Weekly	Grab
Internal Monitoring Station 641						
Flow mgd					Daily	24-Hr Total
TSS mg/l			561	1,240	Weekly	24-Hr Comp
Oil & Grease mg/l			315	881	Weekly	Grab
TR Lead ug/l			1.63	4.31	Weekly	24-Hr Comp
TR Zinc ug/l			1.72	2.36	Weekly	24-Hr Comp
Naphthalene ug/l				1.27	Annually	24-Hr Comp
Tetrachloro-ethylene ug/l				1.91	Annually	Grab
Internal Monitoring Station 642						
Flow mgd					Daily	24-Hr Total
TSS mg/l	31	60			Weekly	24-Hr Comp
Oil & Grease mg/l	26	52			Weekly	Grab
T. Chromium ug/l	1,710	2,770			Weekly	24-Hr Comp
Total Lead ug/l	430	690			Weekly	24-Hr Comp
Total Nickel ug/l	2,380	3,980			Weekly	24-Hr Comp
Total Zinc ug/l	1,480	2,610			Weekly	24-Hr Comp
TTO ug/l		2,130			Weekly	24-Hr Comp

EXHIBIT 3

Table 4-5

AK Steel Corporation - Middletown Works
Proposed NPDES Permit Effluent Limitations and Monitoring Requirements

Outfalls 015 and 005

Effluent Characteristic	Effluent Limitations				Monitoring Requirements	
	Concentration		Mass Loading (kg/day)		Measurement Frequency	Sample Type
	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum		
Outfall 015						
Flow mgd					Daily	24-Hr Total
Oil & Grease mg/l		10			Weekly	Grab
TR Zinc ug/l		450			Weekly	24-Hr Comp
pH su	6.5 to 9.0				Weekly	Grab
Internal Outfall 005						
Flow mgd					Weekly	24-Hr Total
TSS mg/l			227	682	Weekly	24-Hr Comp
Oil & Grease mg/l			227	227	Weekly	Grab
Total Lead ug/l			0.23	0.68	Weekly	24-Hr Comp
Total Zinc ug/l			1.45	3.18	Weekly	24-Hr Comp

EXHIBIT 3

Table 4-6

AK Steel Corporation - Middletown Works
Proposed NPDES Permit Effluent Limitations and Monitoring Requirements

Outfall 099

Effluent Characteristic		Effluent Limitations				Monitoring Requirements	
		Concentration		Mass Loading (kg/day)		Measurement Frequency	Sample Type
		30-Day Average	Daily Maximum	30-Day Average	Daily Maximum		
Outfall 099							
TR Zinc	ug/l	NA	NA	8.92	NA	Weekly	Calculated

Note: 1. Outfall 099 is an NPDES permit compliance point established for the purpose of implementing 30-day average WQBELs for Total Recoverable Zinc for AK Steel discharges to Dicks Creek.

2. Proposed effluent limitations for Total Recoverable Zinc are the sum of the 30-day average WQBELs for Outfalls 004, 015, 003 and 002. Effluent monitoring for Total Recoverable Zinc at these outfalls shall occur on the same days.

ATTACHMENT A

AK Steel Corporation - Middletown Works

Technology-Based Effluent Limitations
40 CFR Parts 420 and 433

EXHIBIT 3

09/16/96 **TECHNOLOGY-BASED EFFLUENT LIMITATIONS**

PLANT: AK Steel Corporation - Middletown Works
LOCATION: Middletown, Ohio

PROCESSES: Blast Furnace, Sinter Plant

OUTFALL: 613

EFFLUENT LIMITATIONS IN LBS/DAY

PROCESS	EFFLUENT GUIDELINE	PRODUCTION (TONS/DAY)	TSS AVE	TSS MAX	OIL & GREASE AVE	OIL & GREASE MAX	AMMONIA - N AVE	AMMONIA - N MAX	TOTAL CYANIDE AVE	TOTAL CYANIDE MAX	PHENOLS (4AAP) AVE	PHENOLS (4AAP) MAX	TOTAL LEAD AVE	TOTAL LEAD MAX	TOTAL ZINC AVE	TOTAL ZINC MAX	TRC MAX
Ironmaking	**420.32/34**		0.026	0.0782			0.00292	0.00876	0.000876	0.00175	0.0000292	0.0000584	0.0000876	0.000263	0.000131	0.000394	0.000146
		6363	331	995			37	111	11.15	22.27	0.37	0.74	1.11	3.35	1.67	5.01	1.86
Sintering	**420.22/23**		0.025	0.0751	0.00501	0.015	0.00501	0.015	0.0015	0.003	0.0000501	0.0001	0.00015	0.000451	0.000225	0.000676	0.00025
		3568	178	536	36	107	36	107	10.70	21.41	0.36	0.71	1.07	3.22	1.61	4.82	1.78
BPJ for Non-Guideline Process Wastewaters (100 gpm, 0.144 mgd)		0.144	25	75	15	45			0.00	0.00			0.30	0.90	0.45	1.35	
			30	90	18	54			0.00	0.00			0.36	1.08	0.54	1.62	
TOTAL Outfall 613		**(lbs/day)**	**539**	**1621**	**54**	**161**	**73**	**219**	**21.9**	**43.7**	**0.73**	**1.46**	**2.55**	**7.65**	**3.81**	**11.46**	**3.64**
		(kg/day)	**245**	**735**	**24**	**73**	**33**	**99**	**9.9**	**19.8**	**0.33**	**0.66**	**1.15**	**3.47**	**1.73**	**5.20**	**1.65**
APPROVED SECTION 301(g) LIMITATIONS		**(kg/day)**					**205**	**410**			**0.90**	**1.80**					

Note: Effluent limitation for Total Residual Chlorine (TRC) applicable if chlorine is applied as part of the wastewater treatment process.

EXHIBIT 3

PLANT: AK Steel Corporation - Middletown Works
LOCATION: Middletown, Ohio

PROCESSES: COLD FORMING (#5,#6 Cold Temper Mills); Hot Coating (#2 Terne, #3 Zinc Grip)

OUTFALL: 614 EFFLUENT LIMITATIONS IN LBS/DAY

PROCESS	EFFLUENT GUIDELINE	PRODUCTION (TONS/DAY)	TSS AVE	TSS MAX	OIL & GREASE AVE	OIL & GREASE MAX	TOTAL LEAD AVE	TOTAL LEAD MAX	TOTAL ZINC AVE	TOTAL ZINC MAX	TOTAL CHROMIUM AVE	TOTAL CHROMIUM MAX	NAPH MAX	TCE MAX
420.102(a)(2),103(a)(2)			0.00313	0.00626	0.00104	0.00261	0.0000156	0.0000469	0.0000104	0.0000313	0.0000418	0.000104	0.0000104	0.0000156
Cold Forming recirc. m/s		0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
420.102(b)(2),103(b)(2)			0.000626	0.00125	0.000209	0.000522	3.10E-06	9.40E-06	4.20E-06	0.0000125	8.40E-06	0.0000209	4.20E-06	6.30E-06
Cold Worked Pipe + Tube		0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
420.100(b) BPJ			30	60	10	25	0.15	0.45	0.20	0.60	0.40	1.00	0.10	0.15
Cold Worked Pipe + Tube		0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
420.102(a)(4),103(a)(4)			0.0113	0.0225	0.00376	0.00939	0.0000563	0.000169	0.0000376	0.000113	0.00015	0.000376	0.0000376	0.0000563
Cold Forming dir app s/s #5&#6 Cold Temper		7253	164	326	55	136	0.82	2.45	0.55	1.64	2.18	5.45	0.55	0.82
420.92(a)(3), 93(a)(3)			0.0225	0.0526	0.00751	0.0225	0.000113	0.000338	0.00015	0.000451				
Pickling Strip/Sulfuric #3 Zinc Grip		1546	70	163	23	70	0.35	1.05	0.46	1.39	0.00	0.00		
420.92(b)(2), 93(b)(2)			0.035	0.0818	0.0117	0.035	0.000175	0.000526	0.000234	0.000701				
Pickling Strip/HCl #2 Terne		508	36	83	12	36	0.18	0.53	0.24	0.71	0.00	0.00		
420.92(b)(4), 93(b)(4)			2.45	5.72	0.819	2.45	0.0123	0.0368	0.0164	0.0491				
H2SO4/HCl Scrubbers #2 Terne		1	5	13	2	5	0.03	0.08	0.04	0.11	0.00	0.00		
420.112(b) and BPJ (0.216 mgd)			0.0438	0.102	0.0146	0.0438	0.15	0.45	0.20	0.60	0.20	0.60		
Alkaline Cleaning Cont. #3 Zinc Grip, #2 Terne		2054	180	419	60	180	0.00	0.00	0.00	0.00	0.00	0.00		
420.122(a)(1), 123(a)(1)			0.0751	0.175	0.025	0.0751	0.000376	0.00113	0.0005	0.0015				
Hot Coating Galv./Strip #3 Zinc Grip, #2 Terne, #4 Aluminize		3544	532	1240	177	532	2.67	8.01	3.54	10.63	0.00	0.00		
420.122(c), 123(c)			16.3	38.1	5.45	16.3	0.0123	0.0368	0.0164	0.0491	0.0164	0.0491		
Hot Coating Fume Scrubber #2 Terne		1	36	84	12	36	0.03	0.08	0.04	0.11	0.04	0.11		
TOTAL Outfall 614	**(lbs/day)**		**1023**	**2328**	**341**	**995**	**4.06**	**12.20**	**4.86**	**14.59**	**2.21**	**5.56**	**0.55**	**0.82**
	(kg/day)		**464**	**1056**	**155**	**451**	**1.84**	**5.54**	**2.21**	**6.62**	**1.00**	**2.52**	**0.25**	**0.37**

EXHIBIT 3

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

PLANT: AK Steel Corporation - Middletown Works
LOCATION: Middletown, Ohio

PROCESS: Steelmaking

OUTFALL: 631

EFFLUENT LIMITATIONS IN LBS/DAY

PROCESS	EFFLUENT GUIDELINE	PRODUCTION (TONS/DAY)	TSS AVE	TSS MAX	OIL & GREASE AVE	OIL & GREASE MAX	TOTAL LEAD AVE	TOTAL LEAD MAX	TOTAL ZINC AVE	TOTAL ZINC MAX
Steelmaking	420.42/43(b)		0.0104	0.0312			0.0000626	0.000188	0.0000939	0.000282
	BOF-SC	8330	173	520	NA	NA	1.04	3.13	1.56	4.70
TOTAL Outfall 631		(lbs/day)	173	520	NA	NA	1.04	3.13	1.56	4.70
		(kg/day)	78.6	236	NA	NA	0.47	1.42	0.71	2.13

EXHIBIT 3

PLANT: AK Steel Corporation - Middletown Works
LOCATION: Middletown, Ohio

PROCESSES: PICKLING (#4, #5 PICKLER, #2 EGL); COLD ROLLING (#3 COLD MILL, #7 TEMPER MILL); ALKALINE CLEANING (#2EGL)

OUTFALL: 641 EFFLUENT LIMITATIONS IN LBS?DAY

PROCESS	EFFLUENT GUIDELINE	PRODUCTION (TONS/DAY)	TSS AVE	TSS MAX	OIL & GREASE AVE	OIL & GREASE MAX	TOTAL LEAD AVE	TOTAL LEAD MAX	TOTAL ZINC AVE	TOTAL ZINC MAX	TOTAL CHROMIUM AVE	TOTAL CHROMIUM MAX	NAPH MAX	TCE MAX
420./102(a)(2),103(a)(2)			0.00313	0.00626	0.00104	0.00261	0.0000156	0.0000469	0.0000104	0.0000313			0.0000104	0.0000156
Cold Forming recirc. m/s #3 Cold Mill		0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
420./102(a)(3),103(a)(3)			0.0376	0.0751	0.0125	0.0313	0.000188	0.000563	0.000125	0.000376			0.000125	0.000188
Cold Forming combination		9034	679	1357	226	566	3.40	10.17	2.26	6.79	0.00	0.00	2.26	3.40
420./102(a)(4),103(a)(4)			0.0113	0.0225	0.00376	0.00939	0.0000563	0.000169	0.0000376	0.000113			0.0000376	0.0000563
Cold Forming dir app s/s #7 Cold Temper		7322	165	329	55	138	0.82	2.47	0.55	1.65	0.00	0.00	0.55	0.82
420./92(a)(3), 93(a)(3)			0.0225	0.0526	0.00751	0.0225	0.000113	0.000338	0.00015	0.000451				
Pickling Strip/Sulfuric #2EGL		2400	108	252	36	108	0.54	1.62	0.72	2.16	0.00	0.00	0.00	0.00
420./92(b)(2), 93(b)(2)			0.035	0.0818	0.0117	0.035	0.000175	0.000526	0.000234	0.000701				
Pickling Strip/HCl #4&#5 HCl Picklers		12862	900	2104	301	900	4.50	13.53	6.02	18.03	0.00	0.00	0.00	0.00
420./92(b)(4), 93(b)(4)			2.45	5.72	0.819	2.45	0.0123	0.0368	0.0164	0.0491				
Pickling HCl/Scrubbers #4&#5 HCl Picklers		4	22	50	7	22	0.11	0.32	0.14	0.43				
420.112(b)			0.0438	0.102	0.0146	0.0438								
Alkaline Cleaning Cont. #2EGL		2400	210	490	70	210								
420./122(a)(1), 123(a)(1)			0.0751	0.175	0.025	0.0751	0.000376	0.00113	0.0005	0.0015	0.0005	0.0015		
Hot Coating Galv./Strip		0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00		
420./122(c), 123(c)			16.3	38.1	5.45	16.3	0.0123	0.0368	0.0164	0.0491	0.0164	0.0491		
Hot Coating Fume Scrubber		0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00		
TOTAL OUTFALL 641	**(lbs/day)**		**2085**	**4583**	**695**	**1943**	**9.37**	**28.12**	**9.69**	**29.08**	**0.00**	**0.00**	**2.81**	**4.22**
	(kg/day)		**946**	**2079**	**315**	**881**	**4.25**	**12.76**	**4.40**	**13.19**	**0.00**	**0.00**	**1.27**	**1.91**

EXHIBIT 3

09/16/96 TECHNOLOGY-BASED EFFLUENT LIMITATIONS

PLANT: AK Steel Corporation - Middletown Works
LOCATION: Middletown, Ohio

PROCESSES: METAL FINISHING, #2 ELECTROGALVANIZING LINE

OUTFALL: 642 EFFLUENT LIMITATIONS IN LBS/DAY

PROCESS	GUIDELINE	PRODUCTION (TONS/DAY)	TSS AVE	TSS MAX	OIL & GREASE AVE	OIL & GREASE MAX	TOTAL LEAD AVE	TOTAL LEAD MAX	TOTAL ZINC AVE	TOTAL ZINC MAX	TOTAL CHROMIUM AVE	TOTAL CHROMIUM MAX	TOTAL NICKEL AVE	TOTAL NICKEL MAX	TTO MAX
433./13(a), 14(a)	200 gpm		31	60	26	52	0.43	0.69	1.48	2.61	1.71	2.77	2.38	3.98	2.13
Met. Finishing	(mgd)	0.288	74.5	144.2	62.5	125.0	1.03	1.66	3.56	6.27	4.11	6.66	5.72	9.57	5.12
OUTFALL 642		(lbs/day)	74.5	144.2	62.5	125.0	1.03	1.66	3.56	6.27	4.11	6.66	5.72	9.57	5.12
		(kg/day)	33.8	65.4	28.3	56.7	0.47	0.75	1.61	2.85	1.86	3.02	2.59	4.34	2.32
433./13(a), 14(a)	250 gpm		31	60	26	52	0.43	0.69	1.48	2.61	1.71	2.77	2.38	3.98	2.13
Met. Finishing	(mgd)	0.360	93.1	180.3	78.1	156.2	1.29	2.07	4.45	7.84	5.14	8.32	7.15	11.96	6.40
OUTFALL 642		(lbs/day)	93.1	180.3	78.1	156.2	1.29	2.07	4.45	7.84	5.14	8.32	7.15	11.96	6.40
		(kg/day)	42.2	81.8	35.4	70.9	0.59	0.94	2.02	3.56	2.33	3.77	3.24	5.42	2.90
433./13(a), 14(a)	300 gpm		31	60	26	52	0.43	0.69	1.48	2.61	1.71	2.77	2.38	3.98	2.13
Met. Finishing	(mgd)	0.432	111.8	216.3	93.7	187.5	1.55	2.49	5.34	9.41	6.16	9.99	8.58	14.35	7.68
OUTFALL 642		**(lbs/day)**	**111.8**	**216.3**	**93.7**	**187.5**	**1.55**	**2.49**	**5.34**	**9.41**	**6.16**	**9.99**	**8.58**	**14.35**	**7.68**
		(kg/day)	**50.7**	**98.1**	**42.5**	**85.0**	**0.70**	**1.13**	**2.42**	**4.27**	**2.80**	**4.53**	**3.89**	**6.51**	**3.48**

EXHIBIT 3

PLANT: AK Steel Corporation - Middletown Works
LOCATION: Middletown, Ohio

PROCESSES: HOT FORMING - Hot Strip Mill; CONTINUOUS CASTING; VACUUM DEGASSING

OUTFALL: 005 **EFFLUENT LIMITATIONS IN LBS/DAY**

PROCESS	GUIDELINE	PRODUCTION (TONS/DAY)	TSS AVE	TSS MAX	OIL AVE	OIL MAX	TOTAL LEAD AVE	TOTAL LEAD MAX	TOTAL ZINC AVE	TOTAL ZINC MAX
HOT FORMING BPJ FOR METALS FROM DEVELOPMENT DOCUMENT VOLUME IV, PAGE 345										
Hot Forming	420.72(a)(2)		0.083	0.221		0.0553	0.0000584	0.000175	0.0000876	0.000263
Primary w/s	Slab Mill	0	0	0	0	0	0.00	0.00	0.00	0.00
Hot Forming	420.72(c)(1)		0.16	0.427		0.107	0.000108	0.000325	0.000163	0.000488
Hot Strip	HSM	16438	5260	14038	1173	3518	3.55	10.68	5.36	16.04
Continuous	420.62/63		0.026	0.078	0.0078	0.0234	0.0000313	0.0000939	0.0000469	0.000141
Casting	BPT/BAT	7583	394	1183	118	355	0.47	1.42	0.71	2.14
Vacuum	420.52/53		0.00521	0.0156	0	0	0.0000313	0.0000939	0.0000469	0.000141
Degassing	BPT/BAT	5221	54	163	81	244	0.33	0.98	0.49	1.47
TOTAL OUTFALL 005		**(lbs/day)**	**5709**	**15384**	**1372**	**4117**	**4.35**	**13.09**	**6.56**	**19.65**
		(kg/day)	**2590**	**6978**	**622**	**1867**	**1.97**	**5.94**	**2.98**	**8.92**

EXHIBIT 3

ATTACHMENT B

AK Steel Corporation - Middletown Works

Preliminary WQBELs for AK Steel Outfalls Discharging to Dicks Creek

EXHIBIT 3

AK Steel - Middletown Works

Preliminary WQBELs for Dicks Creek Outfalls

		mgd	
Upstream Flows	004	2.701	assumes 300 gpm for Outfall 642
	Shaker Ck.	0.097	low flow of 0.15 cfs
	005/015	0.691	
	003	1.270	
	002	0.988	
	Total	5.747	

pH 8.0, Temp 28C, 20C winter (Tables 7-8, 7-3) Modified WWH
(Tables 7-8, 7-6) WWH

			Ammonia-N				Free Cyanide		Phenol		O&G	TR Chromium		TR Lead		TR Nickel		TR Zinc	
			30-Day Average Mar - Nov	30-Day Average Dec - Feb	Daily Maximum Mar - Nov	Daily Maximum Dec - Feb	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum	Daily Maximum	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum	30-Day Average	Daily Maximum
	WQS - MWH	mg/L	1.20	1.60	7.50	9.10	0.012	0.046	0.370	5.300	10	0.77	6.700	0.054	1.000	0.700	6.300	0.410	0.450
	WQS - WWH	mg/L	0.80	1.60	7.50	9.10													
	TMDL - MWH	kg/day	26.10	34.81	163.15	197.96	0.26	1.00	8.05	115.29	217.54	16.75	145.75	1.17	21.75	15.23	137.05	8.92	9.79
	TMDL - WWH	kg/day	17.40	34.81	163.15	197.96													
NH3-N	Allocation to Outfalls																		
0.27/0.48	2.701	004	2.76	2.76	4.91	4.91	NA	NA	NA	NA	102.2	7.87	68.50	0.55	10.22	7.16	64.41	4.19	4.60
0.15/0.49	0.788	005/015	0.45	0.45	1.46	1.46	NA	NA	NA	NA	29.8	2.30	19.98	0.16	2.98	2.09	18.79	1.22	1.34
0.19/0.72	1.270	003	0.91	0.91	3.46	3.46	NA	NA	NA	NA	48.1	3.70	32.21	0.26	4.81	3.37	30.29	1.97	2.16
		Sub-total	4.12	4.12	9.83	9.83	0	0	0	0	180.1	13.87	120.69	0.97	18.01	12.61	113.49	7.39	8.11
	Available for Outfall 002																		
MWH	0.988 mgd	kg/day	21.98	30.68	153.32	188.13	0.26	1.00	8.05	115.29	37	2.88	25.05	0.20	3.74	2.62	23.56	1.53	1.68
MWH		mg/L	5.88	8.20	41.00	50.30	0.07	0.27	2.15	30.83	10	0.77	6.70	0.05	1.00	0.70	6.30	0.41	0.45
WWH		kg/day	13.28	30.68	153.32	188.13													
WWH		mg/L	3.55	8.20	41.00	50.30													

EXHIBIT 3

ATTACHMENT C

AK Steel Corporation - Middletown Works

Preliminary WQBELs for AK Steel Outfall 011 Discharging to the Great Miami River

EXHIBIT 3

AK Steel - Middletown Works

Preliminary WQBELs - Outfall 011

Great Miami River

T. Hardness 350 mg/l

Water Quality Standards

	Average			Maximum			Background WQ
	HH	AG	AL	AL	IMZM		
NH3-N - s			0.85			mg/l	0.05
NH3-N - w			2.3			mg/l	0.05
Free CN	200		12	46	92	ug/l	0
Chromium	3433000	100	580	5000	10000	ug/l	15
Lead	50	100	34	650	1300	ug/l	2.5
Zinc	5000	25000	300	340	670	ug/l	
Naph			44	160	320	ug/l	0.8
TCE	3500		73	540	1100	ug/l	0.02

WQBELs based on total effluent flow: 8.38 mgd

	Average			Maximum		
	HH	AG	AL	AL	IMZM	
NH3-N - s						
NH3-N - w						
Free CN					2.92	kg/day
Chromium					316.73	kg/day
Lead					41.16	kg/day
Zinc					21.25	kg/day
Naph					10.13	kg/day
TCE					34.89	kg/day

EXHIBIT 3

cc: PTC

OhioEPA
State of Ohio Environmental Protection Agency

STREET ADDRESS:
1800 WaterMark Drive
Columbus, OH 43215-1099

TELE: (614) 644-3020 FAX: (614) 644-2329

MAILING ADDRESS:
P.O. Box 1049
Columbus, OH 43216-1049

February 24, 1997

Ms. Karen Winters
Squires, Sanders & Dempsey
Huntington Bldg.
41 S. High Street
Columbus, OH 43215

Re: **Ohio Steel Industry Mtg. with Ohio EPA regarding the National Pollution Discharge Elimination System (NPDES) Permit Renewal Process**

Dear Ms. Winters:

The purpose of the letter is to provide you Ohio EPA's proposal as we discussed during our December 1996 meeting at your office, with representatives from several of Ohio's Steel Manufacturing Companies. In that meeting, the Environmental Managers from various steel industries discussed with us the NPDES permit renewal process, and shared their specific concerns regarding two main issues.

Their first concern dealt with the ability to communicate with the Agency during the renewal process of their major permit, both while we are preparing the draft and after it is public noticed. The steel industry feels they would have less issues to resolve after the permit is issued final, if they could have better dialog with the Agency during some of the more critical steps of the renewal process. Therefore the Agency wishes to offer the following opportunities to discuss various topics about the permit before and after public noticing:

- Permittees will be encouraged to discuss their future permit prior to, or at the time they submit their 2c renewal application.
- Permittees will be provided a copy of the Permit Support Document (PSD) after it has been completed. We will always be open to any written comments after it has been published. We will consider and use those comments after it has been published. We will consider and use those comments as appropriate during further development of the draft permit.
- OEPA will be open to any request for meetings from the permittee prior to public noticing the NPDES permit.

The second main issue discussed involved the amount of time remaining in the renewal process for the permittee to evaluate their permit after it has been public noticed. The statute requires the permit to be noticed a minimum of thirty days. Last year, OEPA maintained a

EXHIBIT 3

60 to 90 day period from the time the permit was public noticed to the time it was issued final. Therefore OEPA will propose the following:

- OEPA will allow the permittee 90 days if necessary to review and comment on draft major permits which have been revised with significant changes (i.e., new Ohio Water Quality Standards (WQS), large interactive Waste Load Allocations (WLA) or unique mixing zone issues).

- OEPA will also not issue as final, a major permit to achieve a set goal of issuing all scheduled permits within a fixed time frame if the facility and OEPA still have significant issues they feel must be resolved.

Please review the above issues and let us know if there are any topics you feel we may have overlooked, or items you wish to further discuss.

Sincerely,

Vaughn Laughlin
Director's Office
Ohio Environmental Protection Agency

cc: Jenny Tiell, Deputy Director
Tom Behlen, Division Chief
George Elmaraghy, Asst. Div. Chief
Paul Novak, Mgr. WRS

dwpc\letters.wpd

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