pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Application Type	**Renewal**	Application No.	**PA0209449**
Facility Type	**Industrial**	APS ID	**1019178**
Major / Minor	**Minor**	Authorization ID	**1319459**

Applicant and Facility Information

Applicant Name	**GKN Sinter Metals Emporium, Inc.**	Facility Name	**GKN Sinter Metals Emporium Auto**
Applicant Address	1 Airport Road	Facility Address	1 Airport Road
	Emporium, PA 15834-2001		Emporium, PA 15834-2001
Applicant Contact	Rachel Krieg	Facility Contact	Rachel Krieg
Applicant Phone	(814) 486-3314 x9618	Facility Phone	(814) 486-3314 x9618
Client ID	134456	Site ID	521169
SIC Code	3399	Municipality	Emporium Borough
SIC Description	Manufacturing - Primary Metal Products, Nec	County	Cameron
Date Application Received	July 7, 2020	EPA Waived?	Yes
Date Application Accepted	July 10, 2020	If No, Reason	

Purpose of Application: Renewal of a NPDES Permit

Summary of Review

The subject facility produces powdered metal parts (sintering) in Emporium Borough, Cameron County.

A map of the facility location and a map provided by the permittee of the discharge locations is attached.

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
✓		Keith C. Allison Keith C. Allison / Project Manager	February 10, 2021
✓		Nicholas W. Hartranft Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	February 18, 2021

Discharge, Receiving Waters and Water Supply Information

Outfall No.	101	Design Flow (MGD)	0
Latitude	41º 30' 32.29"	Longitude	-78º 14' 37.49"
Quad Name	Emporium, PA	Quad Code	0620
Wastewater Description:	Noncontact Cooling Water (NCCW)		
Receiving Waters	Driftwood Branch Sinnemahoning Creek (TSF, MF)	Stream Code	24963
NHD Com ID	61428226	RMI	20.6
Drainage Area	87.2 mi^2	Yield (cfs/mi^2)	0.0154
Q_{7-10} Flow (cfs)	1.35	Q_{7-10} Basis	USGS Gage 01543000-Driftwood Branch Sinnemahoning @ Sterling Run (1915-2008)
Elevation (ft)	1022	Slope (ft/ft)	Undetermined
Watershed No.	8-A	Chapter 93 Class.	TSF, MF
Existing Use	HQ-TSF	Existing Use Qualifier	RBP - Antidegradation
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
Nearest Downstream Public Water Supply Intake	PA-American Water Company @ Milton, PA		
PWS Waters	West Branch Susquehanna River	Distance from Outfall (mi)	Approx. 135

Changes Since Last Permit Issuance: None. The above stream and drainage characteristics were determined for the previous review and remain adequate.

Other Comments: This discharge of NCCW only occurs in the event of an extended power failure. The discharge has not occurred in the past two permit terms.

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	107	Design Flow (MGD)	0
Latitude	41º 30' 26.34"	Longitude	-78º 14' 48.91"
Quad Name	Emporium, PA	Quad Code	0620
Wastewater Description:	Noncontact Cooling Water (NCCW)		
Receiving Waters	West Creek (HQ-CWF, MF)	Stream Code	25222
NHD Com ID	61428260	RMI	0.2700
Drainage Area	61.3 mi^2	Yield (cfs/mi^2)	0.0154
Q_{7-10} Flow (cfs)	0.946	Q_{7-10} Basis	USGS Gage 01543000-Driftwood Branch Sinnemahoning @ Sterling Run (1915-2008)
Elevation (ft)	1025	Slope (ft/ft)	Undetermined
Watershed No.	8-A	Chapter 93 Class.	HQ-CWF, MF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
Nearest Downstream Public Water Supply Intake	PA-American Water Company @ Milton, PA		
PWS Waters	West Branch Susquehanna River	Distance from Outfall (mi)	Approx. 135

Changes Since Last Permit Issuance: None. The above stream and drainage characteristics were determined for the previous review and remain adequate.

Other Comments: This discharge of NCCW only occurs in the event of an extended power failure. The discharge has not occurred in the past two permit terms.

Stormwater Discharges from Industrial Activities

Stormwater discharges from the facility are subject to the requirements of 40 CFR 122.26(b)(14). As a SIC Code 3399 facility, it would be subject to Appendix B of the PAG-03 General Permit for the Discharge of Stormwater from Industrial Activities and as such has been given the once per six months monitoring of Appendix B of the PAG-03 for these outfalls.

All outfalls at the facility (001 – 008) receive stormwater runoff. Outfalls 002-008 discharge to West Creek (HQ-CWF) and Outfall 001 discharges to Driftwood Branch Sinnemahoning (HQ-TSF).

The permittee has conducted the twice per year sampling over the past permit term and a review of the data has shown pollutant levels in expected ranges for stormwater runoff. The current version of the PAG03 has a shorter list of parameters than included in the existing permit and therefore, the current shorter list will be included in this permit.

Included in Part C of the permit will be a benchmark value for TSS of 100 mg/L. If the permittee's sampling demonstrates exceedances of benchmark values for two consecutive monitoring periods, the permittee shall submit a corrective action plan within 90 days of the end of the monitoring period triggering the plan. Appropriate BMPs from the PAG03 have also been incorporated into the stormwater requirements in Part C of this NPDES Permit.

Compliance History

DMR Data for Outfall 001 (from December 1, 2019 to November 30, 2020)

	Outfall 001		Outfall 002		Outfall 003		Outfall 004		Outfall 005		Outfall 006		Outfall 007		Outfall 008	
Parameter	**1st half 2020**	**2nd half 2020**	**1st half 2020**	**2nd half 2020**	**1st half 2020**	**2nd half 2020**	**1st half 2020**	**2nd half 2020**	**1st half 2020**	**2nd half 2020**	**1st half 2020**	**2nd half 2020**	**1st half 2020**	**2nd half 2020**	**1st half 2020**	**2nd half 2020**
pH (S.U.) Daily Maximum	7.87	6.80	8.23	6.3	7.95	E	7.67	6.60	8.10	6.2	7.77	6.4	6.75	6.60	8.11	6.60
CBOD5 (mg/L) Daily Maximum	2.0	4.0	< 2.1	< 4.0	< 2.1	E	< 2.1	< 4.0	< 2.1	< 2.1	< 2.1	< 4.0	< 2.1	< 4.0	< 2.1	< 4.0
TSS (mg/L) Daily Maximum	< 2	4.0	< 2	3.0	< 2	E	< 2	< 2	< 2	2	< 2	< 2	7	14	62	5
Oil and Grease (mg/L) Daily Maximum	< 5	< 5	< 5	< 5	< 5	E	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Total Arsenic (mg/L) Daily Maximum	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	E	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Total Cadmium (mg/L) Daily Maximum	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	E	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Total Chromium (mg/L) Daily Maximum	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	E	< 0.005	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Total Copper (mg/L) Daily Maximum	< 0.005	0.016	< 0.005	< 0.005	< 0.005	E	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.022	< 0.005
Total Iron (mg/L) Daily Maximum	0.18	0.28	0.05	0.18	0.06	E	< 0.05	0.08	< 0.05	0.06	0.1	0.18	0.21	0.27	2.05	0.2
Total Lead (mg/L) Daily Maximum	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	E	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

Compliance History, Cont'd

Summary of Inspections:	The facility has been inspected periodically over the past permit term. The most recent inspection on June 11, 2019 identified no violations at the time of inspection.
Other Comments:	A query in WMS found no open violations in eFACTS for GKN Sinter Metals.

Existing Effluent Limitations and Monitoring Requirements

Outfalls 101 & 107

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/discharge	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/discharge	Grab
TRC	XXX	XXX	XXX	Report	XXX	Report	1/discharge	Grab
Temperature (ºF)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/discharge	I-S
Oil and Grease	XXX	XXX	XXX	15	XXX	30	1/discharge	Grab

Outfalls 001 - 008

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
CBOD5	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Arsenic	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Cadmium	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Chromium	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Copper	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Development of Effluent Limitations

Outfall No.	101 & 107	**Design Flow (MGD)**	0
Latitude	101 - 41º 30' 36" 107 - 41º 30' 26"	**Longitude**	101 - -78º 14' 38.00" 107 - -78º 14' 49.00"

Wastewater Description: Noncontact Cooling Water

As mentioned previously these discharges of NCCW are only anticipated to occur in the event of an extended power failure.

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
Oil and Grease	15	Monthly Average	---	95.2(2)
	30	IMAX	---	95.2(2)
pH	6.0 – 9.0 S.U.	Min – Max	---	95.2(1)

Comments: The above limits from 25 PA Code 95 are applicable and included in the existing permit and will remain.

Water Quality-Based Limitations

Temperature
Temperature monitoring is applicable for these cooling water discharges and will remain.

Chesapeake Bay/Nutrient Requirements
The GKN Emporium Industrial Plant is an insignificant IW facility for Chesapeake Bay discharge permitting pursuant to the Phase II Watershed Implementation Plan (WIP). As a discharger of only cooling water the facility is not expected to contribute to the nutrient load of the watershed. Nutrient loadings should be well under the thresholds of 75 lbs/day and 25 lbs/day for Total Nitrogen and Total Phosphorus, respectively, in the WIP. Therefore, because the discharge is not expected to cause a net addition of nutrients to the watershed no cap loads or regular nutrient monitoring are necessary.

Antidegradation
These existing infrequent discharges are not expected to affect the special protection designations of the receiving streams and therefore, have received no additional requirements pursuant to the antidegradation requirements of 25 PA Code 93.4c.

Toxics Management
No further “Reasonable Potential Analysis” was performed for these infrequent discharges of Non-Contact Cooling Water to determine additional toxic parameters as candidates for limitations or monitoring.

Best Professional Judgment (BPJ) Limitations

Comments: No additional BPJ limitations are necessary at this time.

Anti-Backsliding

No proposed limitations have been made less stringent consistent with the antidegradation requirements of the Clean Water Act and 40 CFR 122.44(I).

Proposed Effluent Limitations and Monitoring Requirements

Outfalls 001-008, (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Total Suspended Solids	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Aluminum, Total	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Copper, Total	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Iron, Total	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Lead, Total	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Zinc, Total	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: Outfall 001-008

Other Comments: The specific parameters to be monitored have been modified consistent with current PAG03 requirements as mentioned above.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 101, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/discharge	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/discharge	Grab
TRC	XXX	XXX	XXX	Report	XXX	Report	1/discharge	Grab
Temperature (ºF)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/discharge	I-S
Oil and Grease	XXX	XXX	XXX	15	XXX	30	1/discharge	Grab

Compliance Sampling Location: Suboutfall 001

Other Comments: The above limitations are unchanged from the existing permit.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 107, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/discharge	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/discharge	Grab
TRC	XXX	XXX	XXX	Report	XXX	Report	1/discharge	Grab
Temperature (ºF)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/discharge	I-S
Oil and Grease	XXX	XXX	XXX	15	XXX	30	1/discharge	Grab

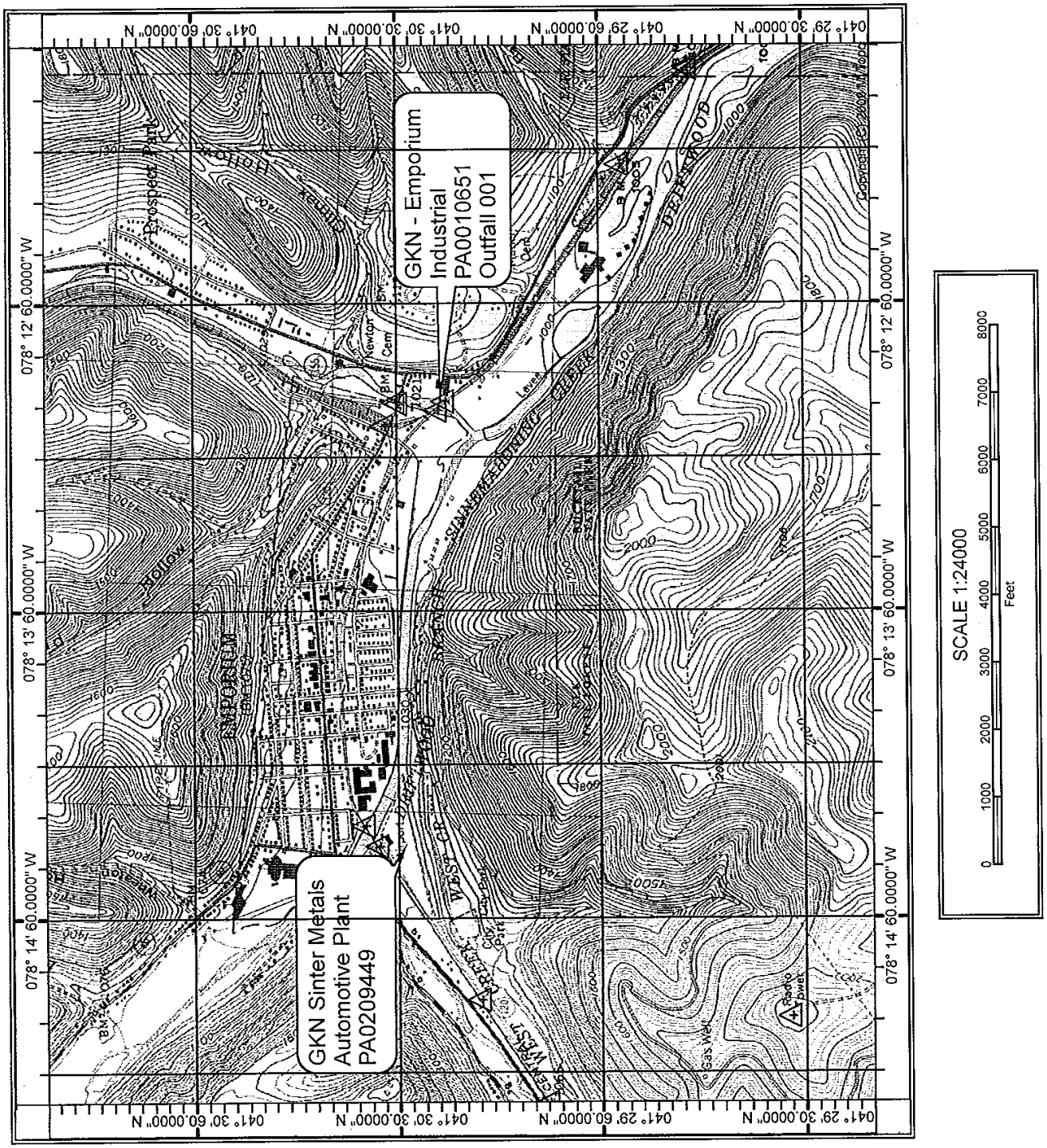
Compliance Sampling Location: Suboutfall 002

Other Comments: The above limitations are unchanged from the existing permit.

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	PENTOXSD for Windows Model (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Toxics Screening Analysis Spreadsheet (see Attachment)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☒	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☒	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☒	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☒	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: Establishing Effluent Limitations for Individual Industrial Permits, 9/10/13
☐	Other:

Attachment(s):

A. Facility/Discharge Location Maps


GKN - Emporium
Industrial
PA0010651
Outfall 001
GKN Sinter Metals
Automotive Plant
PA0209449
SCALE 1:24000
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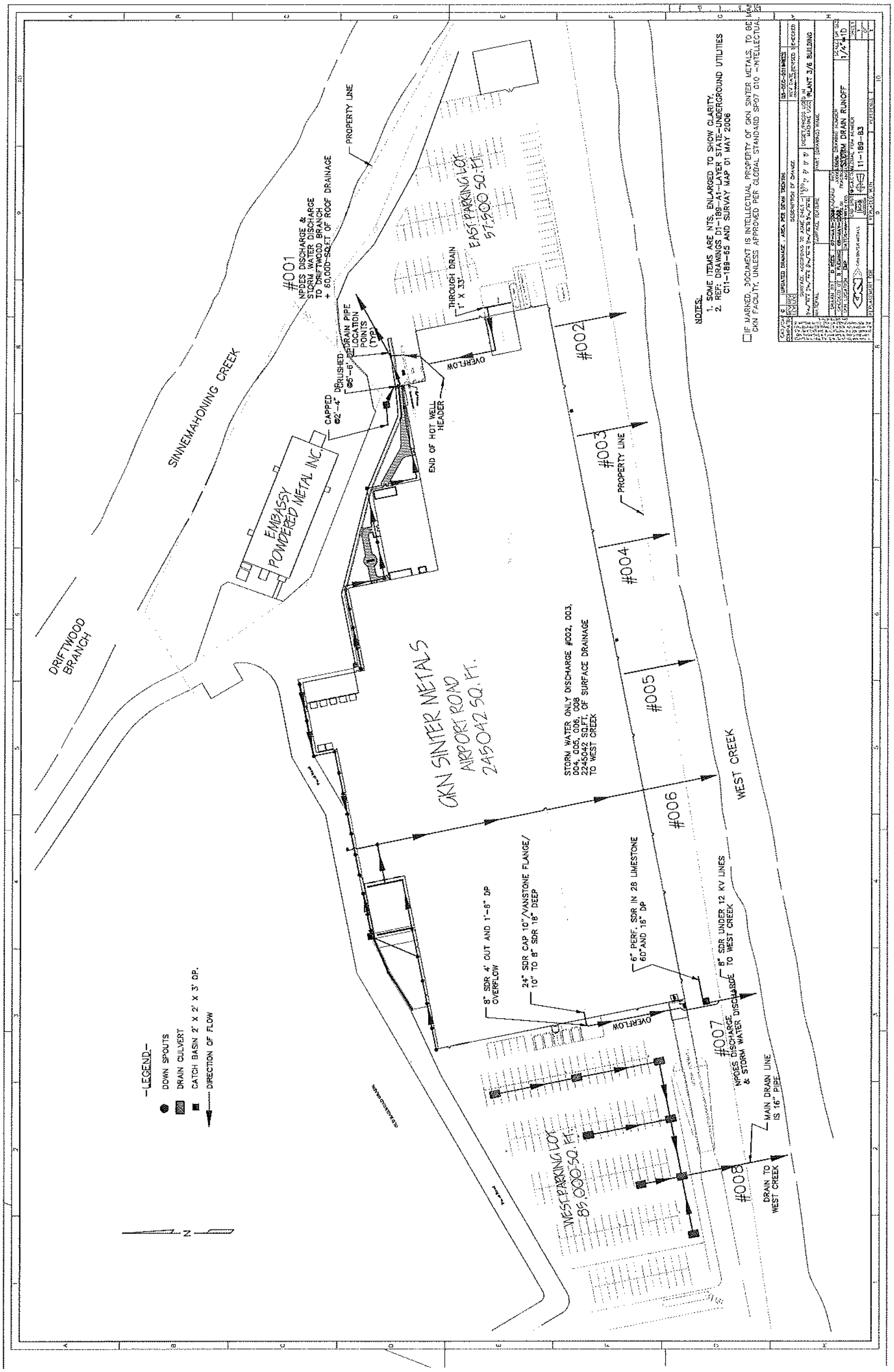
2000
3000
4000
5000
6000
7000
8000
Feet


SINNEMAHONING CREEK
DRIFTWOOD BRANCH
PROPERTY LINE
#001
NPDES DISCHARGE & STORM WATER DISCHARGE TO DRIFTWOOD BRANCH + 60,000-SQ.FT OF ROOF DRAINAGE
EMBASSY POWDERED METAL INC.
EAST PARKING LOT 57,500 SQ.FT.
THROUGH DRAIN 1' X 33'
OVERFLOW
END OF HOT WELL HEADER
CAPPED
#002
#003
#004
#005
#006
GKN SINTER METALS AIRPORT ROAD 245042 SQ.FT.
STORM WATER ONLY DISCHARGE #002, 003, 004, 005, 006, 008 2245042 SQ.FT. OF SURFACE DRAINAGE TO WEST CREEK
WEST CREEK
8" SDR 4' OUT AND 1'-6" DP OVERFLOW
24" SDR CAP 10"/VANSTONE FLANGE/ 10" TO 8" SDR 18" DEEP
6" PERF. SDR IN 2B LIMESTONE 60" AND 16" DP
8" SDR UNDER 12 KV LINES TO WEST CREEK
#007
NPDES DISCHARGE & STORM WATER DISCHARGE
MAIN DRAIN LINE IS 16" PIPE
#008
DRAIN TO WEST CREEK
WEST PARKING LOT 85,000 SQ.FT.
-LEGEND-
DOWN SPOUTS
DRAIN CULVERT
CATCH BASIN 2' X 2' X 3' DP.
DIRECTION OF FLOW
N
NOTES:
1. SOME ITEMS ARE NTS, ENLARGED TO SHOW CLARITY.
2. REF: DRAWINGS D1-189-A1-LAYER STATE-UNDERGROUND UTILITIES C11-189-65 AND SURVAY MAP 01 MAY 2006
STORM DRAIN RUNOFF
PLANT 3/6 BUILDING
11-189-83