pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0000736**
Facility Type	**Industrial**	APS ID	**1007652**
Major / Minor	**Minor**	Authorization ID	**1298801**

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

Applicant and Facility Information

Applicant Name	**Keystone Powdered Metal Company**	Facility Name	**Keystone Powdered Metal**
Applicant Address	251 State Street	Facility Address	251 State Street
	Saint Marys, PA 15857-1658		St Marys, PA 15857
Applicant Contact	Robert Bauer	Facility Contact	
Applicant Phone	(814) 781-4414	Facility Phone	
Client ID	84518	Site ID	251498
SIC Code	3499	Municipality	Saint Marys City
SIC Description	Manufacturing - Fabricated Metal Products, Nec	County	Elk
Date Application Received	November 27, 2019	EPA Waived?	Yes
Date Application Accepted	December 16, 2019	If No, Reason	

Purpose of Application: Renewal of an NPDES Permit for an existing discharge of non–contact cooling water and stormwater.

Summary of Review

This industrial facility is primarily engaged in the manufacture of powdered metal components, mainly for the automotive and small appliance industries. Metal powder mixes are blended, pressed into shapes, and sintered in sintering furnace. Parts can then be repressed, heat treated, or tumbled with a ceramic medial. Other processes include quenching and dunk washed.

Non-contact cooling water, which previously discharged via Outfall 008, is now being recirculated within the process and is no longer discharging to the stream. This outfall has been removed from the proposed renewed permit.

Internal Outfalls 102, 106, and 115 were created for this proposed renewed permit for sampling of non-contact cooling water, which is discharged to Outfall 002, 006, and 015, when discharging during planned plant shutdowns and power outages.

There are currently two chemical additives being added to the non-contact cooling water that have potential to enter a discharge stream. The use of the chemical additives is discontinued a few days before planned plant shutdowns.

Sanitary wastewater is sent to the Saint Marys POTW for treatment.

40 CFR 471.1 is applicable to this facility due to the tumbling operation. However, the water/soap solution is reclaimed, and solids are landfilled. Therefore, no ELGs are applied to discharges from this site.

There are currently no open violations listed in EFACTS for this permittee (2/08/2021).

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*,

Approve	Deny	Signatures	Date
X		Adam Pesek Adam J. Pesek, E.I.T. / Environmental Engineering Specialist	February 8, 2021
X		Justin C. Dickey Justin C. Dickey, P.E. / Environmental Engineer Manager	February 18, 2021

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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	006	Design Flow (MGD)	0
Latitude	41º 25' 20.46"	Longitude	-78º 34' 12.24"
Outfall No.	007	Design Flow (MGD)	0
Latitude	41º 25' 18.72"	Longitude	-78º 34' 22.32"
Outfall No.	015	Design Flow (MGD)	0
Latitude	41º 25' 14.94"	Longitude	-78º 34' 17.28"

Quad Name	Saint Marys	Quad Code	0717
Wastewater Description:	Stormwater associated with industrial activities		

Receiving Waters	Elk Creek	Stream Code	50459
NHD Com ID	102665321	RMI	
Drainage Area		Yield (cfs/mi^2)	0.1139
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	2 gages on Elk Creek
Elevation (ft)	1605	Slope (ft/ft)	0.0089
Watershed No.	17-A	Chapter 93 Class.	CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	METALS		
Source(s) of Impairment	ACID MINE DRAINAGE		
TMDL Status	Final (6/20/2006)	Name	Elk Creek TMDL (Elk County) 50459

Background/Ambient Data		Data Source
pH (SU)	7	Default
Temperature (°C)	20	Default for CWF
Hardness (mg/L)	100	Default
Other:		

Nearest Downstream Public Water Supply Intake		PA American Water Company – Clarion District	
PWS Waters	Clarion River	Flow at Intake (cfs)	195.14
PWS RMI	33.6	Distance from Outfall (mi)	54

Changes Since Last Permit Issuance:

Other Comments: Outfalls 006 and 015 also have sporadic discharges of non-contact cooling water contributing to the waste streams.

Outfall 015 discharges to an unnamed tributary to Elk Creek according to the Department's 1/10/2020 inspection report, based on site observations.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0
Latitude	41º 25' 15.9"	Longitude	-78º 33' 59.16"
Outfall No.	002	Design Flow (MGD)	0
Latitude	41º 25' 17.94"	Longitude	-78º 34' 1.92"
Outfall No.	003	Design Flow (MGD)	0
Latitude	41º 25' 19.26"	Longitude	-78º 34' 3.72"
Outfall No.	004	Design Flow (MGD)	0
Latitude	41º 25' 19.92"	Longitude	-78º 34' 4.92"
Outfall No.	005	Design Flow (MGD)	0
Latitude	41º 25' 20.46"	Longitude	-78º 34' 6.3"
Outfall No.	009	Design Flow (MGD)	0
Latitude	41º 25' 18.48"	Longitude	-78º 34' 2.94"
Outfall No.	010	Design Flow (MGD)	0
Latitude	41º 25' 17.34"	Longitude	-78º 34' 0.9"
Outfall No.	012	Design Flow (MGD)	0
Latitude	41º 25' 18.3"	Longitude	-78º 34' 2.7"
Outfall No.	013	Design Flow (MGD)	0
Latitude	41º 25' 20.16"	Longitude	-78º 34' 5.76"
Outfall No.	014	Design Flow (MGD)	0
Latitude	41º 25' 20.16"	Longitude	-78º 34' 5.76"
Outfall No.	016	Design Flow (MGD)	0
Latitude	41º 25' 19.26"	Longitude	-78º 34' 3.72"
Outfall No.	017	Design Flow (MGD)	0
Latitude	41º 25' 18.3"	Longitude	-78º 34' 2.7"

Quad Name	Saint Marys	Quad Code	0717

Wastewater Description: Stormwater associated with industrial activity

Receiving Waters	Iron Run	Stream Code	50513
NHD Com ID	102665383	RMI	---
Drainage Area		Yield (cfs/mi^2)	0.1139
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	2 gages on Elk Creek
Elevation (ft)	1605	Slope (ft/ft)	0.0089
Watershed No.	17-A	Chapter 93 Class.	CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	

Assessment Status	Impaired		
Cause(s) of Impairment	METALS		
Source(s) of Impairment	ACID MINE DRAINAGE		
TMDL Status	Final (4/08/2005)	Name	Iron Run Watershed (Elk County) 50513

Background/Ambient Data		Data Source
pH (SU)	7	Default
Temperature (°C)	20	Default for CWF

Hardness (mg/L)	100	Default	
Other:			
Nearest Downstream Public Water Supply Intake		PA American Water Company – Clarion District	
PWS Waters	Clarion River	Flow at Intake (cfs)	195.14
PWS RMI	33.6	Distance from Outfall (mi)	54

Changes Since Last Permit Issuance: Discharges via Outfall 008 and Outfall 011 are no longer discharging and are being removed from the proposed renewed permit.

Other Comments: Outfall 001 also has groundwater and springtime hillside seepage contributing to the outfall.

Outfall 002 also has sporadic discharges of non-contact cooling water contributing to the waste stream.

Treatment Facility Summary				
Treatment Facility Name: Keystone Powdered Metal				
WQM Permit No.	**Issuance Date**			
N/A				
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Industrial				
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**

Changes Since Last Permit Issuance:

Other Comments: There are currently no wastewater or stormwater treatment units being operated at this facility.

Compliance History	
Summary of DMRs:	No violations or concerning concentrations/temperatures reported.
Summary of Inspections:	The last site inspection was conducted on January 10, 2020. The inspection report included a number of recommendations for the facility including adding additional stormwater BMPS to certain areas of the facility, and the covering of roll off scrap metal containers outside.

Compliance History

DMR Data for Outfall 001 (from January 1, 2020 to December 31, 2020)

Parameter	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20
Flow (MGD) Average Monthly	0.018906						0.003667					
pH (S.U.) Average Monthly	6.90						6.60					
Total Aluminum (mg/L) Average Monthly	< 0.100						0.100					
Total Iron (mg/L) Average Monthly	< 0.200						< 0.200					
Total Manganese (mg/L) Average Monthly	< 0.0200						0.0944					

DMR Data for Outfall 006 (from January 1, 2020 to December 31, 2020)

Parameter	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20
Flow (MGD) Average Monthly											0.022979	
pH (S.U.) Average Monthly											8.19	
Temperature (ºF) Daily Average											69.6	
TSS (mg/L) Daily Maximum											12.0	

Development of Effluent Limitations

Outfall No.	001	**Design Flow (MGD)**	0.000000
Latitude	41° 25' 15.90"	**Longitude**	78° 33' 59.16"

Wastewater Description: Stormwater associated with industrial activity, groundwater, and springtime hillside seepage

Technology-Based Limitations

Comments: None

Water Quality-Based Limitations

Comments: None

Best Professional Judgment (BPJ) Limitations

Comments: Monitoring requirements found in the Department's General NPDES Stormwater Permit (PAG-03) under Appendix U for pH, total suspended solids nitrate-nitrite, total aluminum, total iron, and total zinc are being incorporated at this outfall in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Industrial Permits." The benchmark value for total suspended solids from Appendix U will be incorporated into the stormwater condition in Part C of the NPDES permit renewal.

Monitoring for total copper is being continued at this outfall, based on the permit reviewer's best professional judgement, due to elevated effluent concentrations reported in eDMRs and application sampling, which raises water quality concerns. Copper is stored and loaded/unloaded within this outfall's drainage area in the plant. Monitoring for total nickel was discontinued, based on a review of eDMR data collected during the previous permit cycle.

The finalized Iron Run Watershed TMDL, which addresses stream impairment due to acid mine drainage in the watershed, does not have any Waste Load Allocations (WLA) for point sources. Effluent monitoring for total aluminum, total iron, and total manganese for both the groundwater / springtime hillside seepage and separately for stormwater runoff were monitored during the previous permit cycle to evaluate if they were contributing to the stream impairment and if further action needed to be taken. Based on a review of the effluent data collected, it was determined that groundwater and springtime hillside seepage discharging to this outfall did not have reasonable potential to exceed Chapter 93 water quality criteria for these metals, and therefore were not contributing to the AMD impairment. Therefore, separate monitoring requirements for the groundwater / hillside springs were removed for this proposed renewed permit. It is still likely that the existing stormwater discharge contributes to the stream impairment, and therefore monitoring for all three metal parameters (total aluminum, total iron and total manganese) is being continued in the renewed permit. Additionally, benchmark values for these three metal parameters will be placed in the stormwater condition in Part C of the renewed permit, which are set to the most string Chapter 93 criteria for those metals, based on the reviewing engineer's best professional judgment to ensure protection of water quality and to not contribute to the instream impairment.

Anti-Backsliding

N/A

Development of Effluent Limitations

Outfall No.	102	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 17.94”	**Longitude**	78° 34’ 1.92”
Outfall No.	106	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 20.46”	**Longitude**	78° 34’ 12.24”
Outfall No.	115	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 14.94”	**Longitude**	78° 34’ 17.28”

Wastewater Description: non-contact cooling water during planned plant shutdowns and power outages

Technology-Based Limitations

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)

Water Quality-Based Limitations

Comments: None. No water quality modeling was done for this miscellaneous wastewater

Best Professional Judgment (BPJ) Limitations

Flow and duration of discharge monitoring
are being placed in the permit as authorized under Chapter 92a.61. Temperature is being monitored due to these waste streams’ heated characteristics in order to further evaluate the discharge for water quality concerns.

Additional Considerations

Total suspended solids monitoring was removed from the permit after review of effluent concentrations from the past four years of eDMR data for these waste streams which showed there is minimal water quality concerns.

Anti-Backsliding

N/A

Development of Effluent Limitations

Outfall No.	002	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 17.94”	**Longitude**	78° 34’ 1.92”
Outfall No.	003	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 19.26”	**Longitude**	78° 34’ 3.72”
Outfall No.	004	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 19.92”	**Longitude**	78° 34’ 4.92”
Outfall No.	005	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 20.46”	**Longitude**	78° 34’ 6.30”
Outfall No.	006	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 20.46”	**Longitude**	78° 34’ 12.24”
Outfall No.	007	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 18.72”	**Longitude**	78° 34’ 22.32”
Outfall No.	009	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 18.48”	**Longitude**	78° 34’ 2.94”
Outfall No.	010	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 17.34”	**Longitude**	78° 34’ 0.90”
Outfall No.	012	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 18.30”	**Longitude**	78° 34’ 2.70”
Outfall No.	013	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 20.16”	**Longitude**	78° 34’ 5.76”
Outfall No.	014	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 20.16”	**Longitude**	78° 34’ 5.76”
Outfall No.	015	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 14.94”	**Longitude**	78° 34’ 17.28”
Outfall No.	016	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 19.26”	**Longitude**	78° 34’ 3.72”
Outfall No.	017	**Design Flow (MGD)**	0.000000
Latitude	41° 25’ 18.30”	**Longitude**	78° 34’ 2.70”

Wastewater Description: Stormwater associated with industrial activity (and non-contact cooling water at 002, 006, and 015)

Technology-Based Limitations

Comments: None

Water Quality-Based Limitations

Comments: None

Best Professional Judgment (BPJ) Limitations

Comments: Monitoring requirements found in the Department’s General NPDES Stormwater Permit (PAG-03) under Appendix U for pH, total suspended solids nitrate-nitrite, total aluminum, total iron, and total zinc are being incorporated at these outfalls in accordance with the Department’s SOP entitled “Establishing Effluent Limitations for Individual Industrial Permits.” The benchmark value for total suspended solids from Appendix U will be incorporated into the stormwater condition in Part C of the NPDES permit renewal.

The finalized Iron Run Watershed TMDL and Elk Creek Watershed TMDL, which addresses stream impairment due to acid mine drainage in the discharge watersheds, do not have any Waste Load Allocations (WLA) for point sources. Effluent monitoring for total aluminum, total iron, and total manganese stormwater runoff were monitored during the previous permit cycle to evaluate if they were contributing to the stream impairments and if further action needed to be taken. Based on a review of the effluent data collected, it is still likely that the existing stormwater discharges contribute to the stream impairments, and therefore monitoring for all three metal parameters (total aluminum, total iron and total manganese) is being continued in the renewed permit for these outfalls. Additionally, benchmark values for these three

metal parameters will be placed in the stormwater condition in Part C of the renewed permit, which are set to the most stringent Chapter 93 criteria for those metals (using a default stream hardness of 100 mg/l), based on the reviewing engineer's best professional judgment to ensure protection of water quality and to not contribute to the instream impairment.

Anti-Backsliding

N/A

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 001, 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	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Nitrate-Nitrite	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Aluminum	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 Manganese	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: Outfall 001 (prior to mixing with any other waters during a qualifying storm event)

Other Comments: Monitoring frequencies mimic those found in the PAG-03 NPDES General Stormwater Permit, Appendix U.

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 002, 003, 004, 005, 006, 007, 009, 010, 012, 013, 014, 015, 016, and 017, 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	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Nitrate-Nitrite	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Manganese	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: At each respective outfall discharge pipe prior to mixing with any other waters during a qualifying storm event.

Other Comments:

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 102, 106, 115, 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
	Total Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD) Internal Monitoring Point	Report Avg Mo	XXX	XXX	XXX	XXX	XXX	1/discharge	Estimate
Duration of Discharge (hours) Internal Monitoring Point	Report	XXX	XXX	XXX	XXX	XXX	1/discharge	Measured
pH (S.U.) Internal Monitoring Point	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/discharge	Grab
Temperature (ºF) Internal Monitoring Point	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/discharge	Measured

Compliance Sampling Location: Outfall 002, 006, and 015 (when stormwater is not contributing to the discharge and prior to mixing with any other waters)

Other Comments: