pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**New**	Application No.	**PA0284840**
Facility Type	**Storm Water**	APS ID	**1059695**
Major / Minor	**Minor**	Authorization ID	**1389949**

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

Applicant and Facility Information

Applicant Name	**US Gypsum Co.**	Facility Name	**US Gypsum Aliquippa Plant**
Applicant Address	1 Woodlawn Road	Facility Address	1 Woodlawn Road
	Aliquippa, PA 15001-5413		Aliquippa, PA 15001-5413
Applicant Contact	Frank Rosetti	Facility Contact	Same as Applicant
Applicant Phone	(724) 857-4370	Facility Phone	Same as Applicant
Client ID	149043	Site ID	490170
SIC Code	3275	Municipality	Aliquippa City
SIC Description	Manufacturing - Gypsum Products	County	Beaver
Date Application Received	March 18, 2022	EPA Waived?	Yes
Date Application Accepted	March 31, 2022	If No, Reason	

Purpose of Application: NPDES Permit Coverage for Stormwater Discharges associated with Industrial Activities

Summary of Review

The Department received a new Individual NPDES permit application for Industrial Stormwater Discharges from the United States Gypsum Company (USG) for their site located in Aliquippa, Beaver County on March 18, 2022. The site is currently covered under the PAG-03 General Stormwater permit (PAR216148) but USG is applying for the Individual permit because USG intends to construct a new outdoor synthetic gypsum storage pad, which is not covered under the General Permit.

The site is a synthetic gypsum (syn-gyp) wallboard plant with an SIC code of 3275, Manufacturing Gypsum Products. US Gypsum Co. manufactures wallboard from synthetic gypsum and recycled wallboard for use by the construction industry. The gypsum is generated at coal fired power plants and is the waste product of the emissions scrubbing process. Delivery is via barge. All manufacturing is conducted under roof and there are no process wastewater discharges associated with the wallboard manufacturing.

The site currently operates under the PAG-03 General Permit and is subject to appendix N for glass, clay, cement, concrete, and gypsum products. Other than stormwater, the site has no wastewater discharges. USG is planning the construction of a new outdoor storage area/pad for Syn-Gyp. The new storage area/pad will be located just north of the existing syn-gyp storage shed. The area/pad is conceptually to be constructed as follows:

- Dimensions of new outdoor storage pad are 420 feet by 55 feet wide concrete base, and 420 feet by 120 feet wide, 3-foot base of syn-gyp (73,500 square feet total),
- Two 8-foot-high walls, one 420 feet long on the east side, and one 120 feet long on the north side of the storage area, for pushing. managing Syn-Gyp pile,
- A Cat 980 Front End Loader with a 9 cubic yard bucket (or approximately 8.5 tons per load, based on 70 lbs/ft^3 Syn-Gyp) will be used to move material,
- Pile height on the new storage area/pad could be up to 50 feet high.

Approve	Deny	Signatures	Date
X		Adam Olesnanik / Project Manager	5/6/2022
X		Michael E. Fifth, P.E. / Environmental Engineer Manager	5/10/2022

Summary of Review

- Stormwater run-on and run-off will be managed by BMPs as per historic practices at USG along with new NPDES permit requirements.
- The area/pad will be designed to store up to 40,000 tons of Syn-Gyp, supplied by up to 120 trucks per day (and 500 trucks per week, assuming 22 tons per truck load).

The site has one stormwater outfall that discharges to the Ohio River, designated in 25 PA Code Chapter 93 as a Warm Water Fishery. The drainage area of Outfall 001 consists of raw material storage and waste sheetrock handling. Operations largely conducted inside buildings or under roof or cover. The application included an additional Outfall that drains to Outfall 001. This outfall will not be included in the permit because it does not discharge directly to the Waterways of the Commonwealth, and all stormwater that drains to Outfall 001 from this outfall will be monitored at Outfall 001.

The site was last inspected in 2019. The permittee has no open violations.

Draft permit issuance is recommended.

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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0
Latitude	40º 37' 49"	Longitude	-80º 14' 27"
Quad Name	Ambridge	Quad Code	1404
Wastewater Description:	Stormwater		
Receiving Waters	Ohio River (WWF)	Stream Code	32317
NHD Com ID	99682404	RMI	955
Watershed No.	20-G	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Dioxin, Pathogens, Polychlorinated Biphenyls (PCBs)		
Source(s) of Impairment	Source Unknown		
TMDL Status	Final	Name	Ohio River

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0
Latitude 40º 37' 49" **Longitude** -80º 14' 27"
Wastewater Description: Stormwater

Technology-Based Limitations

Stormwater Technology Limits

Outfall 001 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfall receives stormwater. The SIC code for the site is 3275 (Manufacturing - Gypsum Products) and the corresponding appendix of the PAG-03 that would apply to the facility is Appendix N (Glass, Clay, Cement, Concrete and Gypsum Products). The reporting requirements applicable to stormwater discharges are shown in Table 1 below. Along with the monitoring requirements, sector specific BMPs included in Appendix N of the PAG-03 will also be included in Part C of the Draft Permit.

Table 1: PAG-03 Appendix (N) Monitoring Requirements

Parameter	Max Daily Concentration
pH	Monitor and Report
Total Suspended Solids (TSS)	Monitor and Report
Total Aluminum	Monitor and Report
Total Iron	Monitor and Report

Best Professional Judgment (BPJ) Technology Limitation Analysis

There are no Effluent Limitation Guidelines (ELGs) developed for stormwater discharges from this class of industrial activity. In the absence of any ELG's, technology limitations are developed based on Best Professional Judgment. In order to ensure that adequate BMPs are in place and effective, the Department proposes effluent limitations which are in line with the EPA's stormwater benchmark goals, based on EPA'S 2021 Multisector General Permit (MSGP) document. These values are typical of the Department's PAG-03 Action Levels; above which, permittees are required to reduce their discharge concentrations. A daily maximum Total Suspended Solids limitation of 100 mg/L is proposed, consistent with the MSGP and the PAG-03 benchmark goal. Since the proposed gypsum piles will lack cover and be exposed to precipitation, the facility must achieve an actual effluent limit instead of a benchmark goal. In establishing effluent limitations on a case-by-case basis, various pollutant controls are considered. When evaluating appropriate BPJ limits for a permittee, the Department considers six factors as required by 40 CFR § 125.3.

The six factors are: (1) the age of the equipment and facility, (2) the process employed, (3) the engineering aspects of the application of various types of control technique, (4) process changes, (5) the cost of achieving such effluent reduction and, (6) non-water quality environmental impact (including energy requirements). Factors specific to each level of control technology include costs, pollutant reduction benefits and economic achievability. Each of these factors are discussed below as they relate to the US Gypsum Aliquippa Plant.

1. Equipment and Facility Age – Stormwater pollutants are typically controlled through the implementation of Best Management Practices (BMPs) and housekeeping. Only in rare cases should an industrial wastewater treatment system be considered. US Gypsum may need to invest resources into specialized pollution control equipment including more sediment covers, catch basin sediment traps and/or structural controls if stormwater discharges from the site are contaminated by the exposed gypsum pile runoff.

2. The Process Employed – As mentioned in the previous paragraph, the Department anticipates compliance with the proposed effluent limitations through implementation of BMPs and housekeeping.

3. Engineering Aspects of Control Techniques – Additional BMPs and/or engineering solutions may be necessary if the facility is unable to meet its proposed effluent limitations. Although immediate BMP pollutant controls including sediment covers, increased frequency of changing covers and booms at catch basins, and more frequent street sweeping may be achieved without an engineer, additional structural solutions may require engineering design

expertise. If a treatment system is necessary to meet the effluent limits, the Department and US Gypsum will evaluate the engineering aspects of the project at that time.

4. Process Changes – Operations at the site are proposed to change. USG is planning the construction of a new outdoor storage area/pad for Syn-Gyp. This change will increase the amount of material exposed to stormwater on site and may lead to an increase of contaminates in the stormwater discharges. Implementation of additional BMPs may be required due to this process change.

5. The Cost of Achieving Effluent Reduction – Compliance with the proposed effluent limitations is likely achievable through implementation of BMPs and housekeeping. As such, any expenses associated with BMP implementation are minimal.

6. Non-Water Quality Environmental Impacts (Including Energy Requirements) – There are no known non-water quality environmental impacts or energy requirements associated with the installation of BMPs. The proposed effluent limits are appropriate and attainable using widely available BMPs and housekeeping measures.

The proposed 100 mg/L TSS effluent limitation is readily achievable using a combination of site-specific BMPs and general housekeeping procedures such as the utilization of sediment covers over catch basins, increased frequency of changing covers and booms at the catch basins and outfall, removal of solids from the sedimentation basin, and street sweeping, silt fencing, and sediment traps. If US Gypsum is unable to meet the TSS effluent limitation, the construction of additional sedimentation technologies may be necessary.

Water Quality-Based Limitations

Stormwater WQBELs

Water quality analyses are typically performed under low-flow (Q7-10) conditions. Stormwater discharges occur at variable rates and frequencies but not however during Q7-10 conditions. Since the discharge from Outfall 001 is composed entirely of stormwater, a formal water quality analysis cannot be accurately conducted. Accordingly, water quality-based effluent limitations based on water quality analyses are not proposed.

Total Maximum Daily Loads

The Ohio River has a TMDL for PCBs and Chlordane. The TMDL outlines a plan to achieve water quality standards in the water body. The TMDL applies only to discharges of PCBs and chlordane to the Ohio River and does not provide wasteload allocations for either. The TMDL goal is for levels of PCB and chlordane in the water column to be equal to or less than the Commonwealth's water quality criteria. The production and use of PCB in the United States was banned in July of 1979. In addition, the TMDL acknowledges that there are no longer any known point sources of either pollutant in the watershed and the TMDL is expected to achieve implementation through "natural attenuation". While it is now illegal to manufacture, distribute, or use PCBs in the United states, these synthetic oils were used in the past. However, this site has not been shown to have PCBs in its discharge and has not been known to use PCBs. Neither chlordane nor PCB's are used, generated, or stored at the site; nor is there any evidence to suggest that PCBs and chlordane were ever used, generated, or stored onsite in the past. Based upon these considerations, the Ohio TMDL is not applicable to site's discharges.

Anti-Backsliding

The limitations in the site's current permit, PAR216148, can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l) and are displayed in Table 2 below.

Table 2: PAR216148 Monitoring Requirements

Parameter	Max Daily Concentration
pH	Monitor and Report
Total Suspended Solids (TSS)	Monitor and Report
Total Aluminum	Monitor and Report
Total Iron	Monitor and Report

Proposed Effluent Limitations and Monitoring Requirements

The proposed effluent monitoring requirements for Outfall 001 are displayed in Table 3 below, they are the most stringent values from the above effluent limitation development.

Table 3: Proposed Effluent Monitoring Requirements

Parameter	Daily Maximum (mg/L)	Measurement Frequency	Sample Type
Total Suspended Solids (TSS)	100.0	1/6 Months	Grab
Total Aluminum	Report	1/6 Months	Grab
Total Iron	Report	1/6 Months	Grab
pH (S.U.)	Report	1/6 Months	Grab

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model 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:
☐	Other:

Facility Drainage Map