pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**New**	Application No.	**PA0245186**
Facility Type	**Industrial**	APS ID	**1011920**
Major / Minor	**Minor**	Authorization ID	**1306470**

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

Applicant and Facility Information

Applicant Name	**Victory Brewing Co.**	Facility Name	**Victory Brewing Parkesburg Site**
Applicant Address	420 Acorn Lane	Facility Address	3127 Lower Valley Road
	Downingtown, PA 19335		Parkesburg, PA 19365
Applicant Contact	Ray Reiff	Facility Contact	Ray Reiff
Applicant Phone	(610) 514-7000	Facility Phone	(610) 514-7000
Client ID	304462	Site ID	770150
SIC Code	2082	Municipality	West Sadsbury Township
SIC Description	Manufacturing - Malt Beverages	County	Chester
Date Application Received	February 4, 2020	EPA Waived?	Yes
Date Application Accepted	Not Applicable	If No, Reason	

Purpose of Application: Non-contact cooling water and stormwater run-off into Valley Creek.

Summary of Review

Victory Brewing submitted an application for a NPDES permit to discharge non-contact cooling water (NCCW) and stormwater associated with industrial activity. Victory Brewing manufactures malt beverages. There are two (2) cooling towers called the Evapco and the Bac. The discharge is to the Valley Creek, a tributary to East Branch Octoraro Creek. This creek is located in the Susquehanna River Basin which is part of the larger Chesapeake Bay Basin.

The water used for NCCW comes from the public water supply (PWS) PA American Water. The facility sends process wastewater to the wastewater treatment plant in Coatesville, PA. This permit is for NCCW and SW only.

This facility uses three (3) chemical additives in the NCCW; all three chemical additives are on the DEP approved list.
GCS6308 – Phosphonate based corrosion inhibitor
GCS3907 – Stabilized Liquid Bromine – Oxidizing biological control
GCS3215 – Isothiazolin - non-oxidizing biocide

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
X		Harmonie Hawley, PhD, PE / Environmental Engineering Specialist /s/	5/7/2020
X		Pravin C. Patel, P.E. / Environmental Engineer Manager /s/	05/07/2020

Summary of Review

Maximum usage rates as reported in the permit application and subsequent correspondences:

Discharge Rates:
The Evapco Tower volume is 2,000 gallons with a holding time index of 12.4 hours. The average weekly blowdown for the Evapco Tower is about 5,000 gallons. These blowdowns occur as needed. The Evapco tower reportedly releases ~ 714 gpd or 0.50 gpm in daily bleed/blowdown discharges as needed under normal operation.

The BAC Tower volume is 900 gallons (contained in two towers of 450 gallons each) with a holding time of 5.6 hours. The average weekly blowdown for the BAC Tower is about 4,000 gallons per week. These blowdowns occur as needed. The BAC towers reportedly release ~ 571 gpd or 0.40 gpm in daily bleed/blowdown discharges as needed under normal operation.

The combined flow is 9,000 gallons per week or 0.001286 MGD.

Chemical Additives:
GCS6308 = 1.723 lbs. per week; 0.187 lbs. of product / 1000 gallons of blowdown – (40% active product)
BAC Tower = 0.75 lbs. of product per week. Evapco Tower = 0.973 lbs. of product per week.

GCS3907 = 1.695 lbs. per week.
BAC Tower = 0.525 lbs. of product per week, fed at 0.075 lbs. per application (7 applications per week). This is based on 900 gallons at 10 ppm of product. Evapco Tower = 1.17 lbs. of product per week, fed at 0.167 lbs. per application (7 applications per week). This is based on 2,000 gallons at 10 ppm of product.

GCS3215 = 4.35 lbs. per week.
BAC Tower = 1.35 lbs. per week, fed at 0.676 lbs. per application (2 applications per week). This is based on 900 gallons at 90 ppm of product.
Evapco Tower = 3 lbs. per week, fed at 1.5 lbs. per application (2 applications per week). This is based on 2,000 gallons at 90 ppm of product.

Annual Batch Discharge:
Evapco: According to Victory, the maximum “batch” discharge from the 2,000-gallon Evapco tower is 403 gallons during annual servicing. When discharged, it is released at a rate of 45 gallons per minute. This will therefore take approximately 9 minutes as currently configured; however, the discharge rate can be slowed.

BAC: According to Victory, the maximum “batch” discharge from the 900-gallon BAC tower system is 482 gallons (2x241 gallons). The two towers are connected and when the annual service is done, they discharge one at a time (as not to disrupt cooling of HVAC in the offices and Tap room spaces). When discharged, it is released at a rate of 45 gallons per minute. This will therefore take approximately 10 minutes.

Act 14 Notifications
Chester County received January 8, 2020
West Sadsbury Township received January 8, 2020

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.001286
Latitude	39º 57' 2.40"	Longitude	-75º 56' 3.83"
Quad Name	Parkesburg	Quad Code	1938
Wastewater Description:	Noncontact Cooling Water (NCCW) blowdown discharge and Stormwater		

Receiving Waters	Valley Creek (TSF, MF)	Stream Code	07131
NHD Com ID	57464913	RMI	0.8500
Drainage Area	1.37 square miles	Yield (cfs/mi^2)	0.146
Q_{7-10} Flow (cfs)	0.2	Q_{7-10} Basis	Pennsylvania StreamStats
Elevation (ft)	508	Slope (ft/ft)	0.005
Watershed No.	7-K	Chapter 93 Class.	TSF, MF
Existing Use	Trout Stocking	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Impaired		
Cause(s) of Impairment	Siltation		
Source(s) of Impairment	Agriculture		
TMDL Status	Tentative	Name	Octoraro Creek Watershed TMDL

Background/Ambient Data		Data Source
pH (SU)	8.8	Application analysis results
Temperature (°F)	77.7	Application analysis results

Nearest Downstream Public Water Supply Intake		Not applicable – no intakes	
PWS Waters	N/A	Flow at Intake (cfs)	N/A
PWS RMI	N/A	Distance from Outfall (mi)	N/A

Changes Since Last Permit Issuance: Not applicable – new permit

Other Comments: The TMDL for the Octoraro Creek Watershed is not finalized.

Treatment Facility Summary				
Treatment Facility Name: Not Applicable				
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Industrial	N/A	N/A	N/A	N/A
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
N/A	N/A	N/A	N/A	N/A

Changes Since Last Permit Issuance: Not applicable – new permit

Other Comments: This is NCCW and stormwater, thus there is no treatment facility.

Compliance History	
Summary of DMRs:	Not Applicable – new permit
Summary of Inspections:	In progress

Other Comments: None

Compliance History

Not applicable – new permit

Development of Effluent Limitations

Outfall No. 001 (IMP001) **Design Flow (MGD)** 0.001286
Latitude 39º 57' 7.89" **Longitude** -75º 56' 8.04"
Wastewater Description: Noncontact Cooling Water (NCCW)

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
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Comments: The above industrial minimum technology standards were evaluated. As the source water is treated potable water, and the discharge is NCCW, it is assumed fecal coliform will not be an issue.

The intake water is PWS and is presumed to contain chlorine. As the facility adds a bromine based chemical additive, total residual halogens will be monitored in lieu of total residual chlorine (TRC), but the limits will be those of TRC per the standard.

Oil & grease (O&G) will be monitored as the concentration noted in the application less than 4.8 mg/l (quantitation limit 4.8). Standard practice is to monitor O&G if the concentration is between 4 mg/L and 8 mg/L (SOP and Chapter 95.2); as the detection limit is above 4 mg/l, O&G will be monitored.

Temperature was added as a parameter for this facility as it is cooling water discharge. The application sample was at 77.7 °F and was taken in the winter.

Total Dissolved Solids (TDS) sample results were 926 mg/l which indicates a potential for contamination (Chapter 95.10). While the concentration did not exceed 1,000 mg/l, the concentration of 926 mg/l is high enough to warrant the need for baseline monitoring.

This facility is in the Chesapeake Bay Watershed and the chemical additives contain phosphorus, thus total phosphorous monitoring was added to the permit. The sampling frequency is consistent with the Phase 3 WIP Supplement.

Monitoring frequency and sample type are consistent with Table 6-4 of the Permit Writer's Manual (362-0400-001 10/1/97).

Water Quality-Based Limitations

A "Reasonable Potential Analysis" was not conducted as this is NCCW. The BOD_5 was well below 30 mg/l and the reported maximum ammonia-N concentration was <0.10 mg/l.

Best Professional Judgment (BPJ) Limitations

Comments: The BOD_5 (<4.1 mg/l) and Total Suspended Solids (TSS, 78 mg/l) are less than 100 mg/l, no monitoring is needed.

Anti-Backsliding

Not applicable

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	Maximum	Instant. Maximum		
Flow (cfs) Internal Monitoring Point	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/month	Metered
pH (S.U.) Internal Monitoring Point	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/month	Grab
Total Residual Halogens Internal Monitoring Point	XXX	XXX	XXX	0.5	XXX	1.6	1/month	Grab
Temperature (ºF) Internal Monitoring Point	XXX	XXX	XXX	XXX	XXX	110.0	1/month	I-S
Total Dissolved Solids Internal Monitoring Point	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/month	Grab
Oil and Grease Internal Monitoring Point	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/month	Grab
Total Phosphorus Internal Monitoring Point	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

Compliance Sampling Location: IMP001

Other Comments: None.

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
BOD5	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
COD	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
Nitrate-Nitrite	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: 001

Other Comments: These effluent limitations and monitoring requirements are for stormwater. These limits and monitoring requirements are consistent with stormwater sampling protocols for facilities of a similar industry (PAG03). Total Phosphorous and Total Nitrogen monitoring were added as the facility is located in the Chesapeake Bay Watershed.

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 for Establishing Effluent Limitations for Individual Industrial Permits, BCW-PMT-032, Final November 9, 2012, Revised January 10, 2019, Version 1.5. SOP for New and Reissuance Industrial Waste and Industrial Stormwater Individual NPDES Permits, BPNPSM-PMT-001, Final November 9, 2012, Revised October 11, 2013, Version 1.5. SOP for Chemical Additives, BPNPSM-PMT-030, Final November 9, 2012, Revised January 13, 2015, Version 1.4. SOP for Whole Effluent Toxicity (WET), BPNPSM-PMT-031, Final November 9, 2012, Revised May 13, 2014, Version 1.4.
☒	Other: DEP, Phase III Watershed Implementation Plan (WIP) Supplement. Policy and Procedure for NPDES Permitting of Discharges of Total Dissolved Solids (385-2100-002).