pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

**Northwest Regional Office**
**CLEAN WATER PROGRAM**

| | | | |
|---|---|---|---|
| Application Type | **Renewal** | Application No. | **PA0001872** |
| Facility Type | **Industrial** | APS ID | **1052948** |
| Major / Minor | **Minor** | Authorization ID | **1378516** |

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

## Applicant and Facility Information

| | | | |
|---|---|---|---|
| Applicant Name | **Ardagh Glass Inc.** | Facility Name | **Ardagh Glass** |
| Applicant Address | P.O. Box 50487<br>Indianapolis, IN 46250-0487 | Facility Address | 1 Glass Place<br>Port Allegany, PA 16743-1154 |
| Applicant Contact | Richard Tomicek (VP Envr Compliance) | Facility Contact | Andrew Johnson (H&S Manager) |
| Applicant Phone | (412) 335-7436<br>(Richard.tomicek@ardaghgroup.com) | Facility Phone | (814) 642-3269<br>(andrew.johnson@ardaghgroup.com) |
| Client ID | 42150 | Site ID | 3373 |
| SIC Code | 3221 | Municipality | Port Allegany Borough |
| SIC Description | Manufacturing - Glass Containers | County | McKean |
| Date Application Received | December 9, 2021 | EPA Waived? | Yes |
| Date Application Accepted | February 24, 2022 | If No, Reason | |

Purpose of Application: Renewal of an NPDES Permit for an existing discharge of industrial waste.

## Summary of Review

This facility is a manufacturer of commercial glass containers for food and beverage customers. The discharges from the facility are process wastewater, non-process wastewater and industrial stormwater. Sanitary wastewater discharges to public sewer.

There are no known threatened and endangered mussel species in the vicinity of this discharge according to Department biologists.

There are four chemical additives currently in use at this facility for operations that have been approved.

There is currently one open violation listed in EFACTS for this client, at this facility, under the Air Quality Program (4/23/2025).

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 | | Adam J. Pesek<br>Adam J. Pesek, E.I.T. / Project Manager | January 27, 2024 |
| X | | Adam Olesnanik<br>Adam Olesnanik, P.E. / Environmental Engineer Manager | February 7, 2025 |

**Discharge, Receiving Waters and Water Supply Information**

| | | | |
|---|---|---|---|
| Outfall No. | 001 | Design Flow (MGD) | 0.072 |
| Latitude | 41º 48' 28.8" | Longitude | -78º 17' 16.3" |
| Quad Name | Port Allegheny | Quad Code | 01102 |
| Wastewater Description: | IW Process Effluent with ELG, Noncontact Cooling Water (NCCW), Stormwater associated with industrial activities | | |

| | | | |
|---|---|---|---|
| Receiving Waters | Allegheny River | Stream Code | 42122 |
| NHD Com ID | 112370567 | RMI | 290.24 |
| Drainage Area | 246.88 | Yield (cfs/mi$^2$) | 0.062 |
| $Q_{7-10}$ Flow (cfs) | 15.33 | $Q_{7-10}$ Basis | USGS Gage #03007800 |
| Elevation (ft) | 1480 | Slope (ft/ft) | 0.0001 |
| Watershed No. | 16-C | Chapter 93 Class. | CWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Attaining Use(s) | | |
| Cause(s) of Impairment | | | |
| Source(s) of Impairment | | | |
| TMDL Status | | Name | |

| Background/Ambient Data | | Data Source |
|---|---|---|
| pH (SU) | 7.2 | WQN 860 |
| Temperature (°C) | 20 | Default (CWF) |
| Hardness (mg/L) | 33 | USGS Gage #03007800 |
| Other: | | |

| | | | |
|---|---|---|---|
| Nearest Downstream Public Water Supply Intake | | PA/NY state line | |
| PWS Waters | Allegheny River | Flow at Intake (cfs) | 37.7 |
| PWS RMI | 0 | Distance from Outfall (mi) | 25 |

Changes Since Last Permit Issuance: N/A

Other Comments: N/A

**Discharge, Receiving Waters and Water Supply Information**

| | | | |
|---|---|---|---|
| Outfall No. | 003 | Design Flow (MGD) | 0 |
| Latitude | 41º 48' 41.7" | Longitude | -78º 17' 0.87" |
| Quad Name | Port Allegheny | Quad Code | 01102 |
| Wastewater Description: | Stormwater associated with industrial activities | | |
| Receiving Waters | Storm Sewer to Allegheny River | Stream Code | 42122 |
| NHD Com ID | 112370567 | RMI | 290.47 |
| Drainage Area | 246.88 | Yield (cfs/mi$^2$) | 0.062 |
| $Q_{7-10}$ Flow (cfs) | 15.33 | $Q_{7-10}$ Basis | USGS Gage #03007800 |
| Elevation (ft) | 1480 | Slope (ft/ft) | 0.0001 |
| Watershed No. | 16-C | Chapter 93 Class. | CWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Impaired | | |
| Cause(s) of Impairment | SILTATION | | |
| Source(s) of Impairment | GRAZING IN RIPARIAN OR SHORELINE ZONES | | |
| TMDL Status | | Name | |

| Background/Ambient Data | | Data Source |
|---|---|---|
| pH (SU) | 7.2 | WQN 860 |
| Temperature (°C) | 20 | Default (CWF) |
| Hardness (mg/L) | 33 | USGS Gage #03007800 |
| Other: | | |

| | | | |
|---|---|---|---|
| Nearest Downstream Public Water Supply Intake | | PA/NY state line | |
| PWS Waters | Allegheny River | Flow at Intake (cfs) | 37.7 |
| PWS RMI | | Distance from Outfall (mi) | 25.25 |

Changes Since Last Permit Issuance:

Other Comments:

**Discharge, Receiving Waters and Water Supply Information**

| | | | |
|---|---|---|---|
| Outfall No. | 004 | Design Flow (MGD) | 0 |
| Latitude | 41º 48' 34.3" | Longitude | -78º 16' 59.3" |
| Quad Name | Port Allegheny | Quad Code | 01102 |
| Wastewater Description: | Stormwater associated with industrial activities | | |
| Receiving Waters | Storm Sewer to Allegheny River | Stream Code | 42122 |
| NHD Com ID | 112370567 | RMI | 290.47 |
| Drainage Area | 246.88 | Yield (cfs/mi$^2$) | 0.062 |
| $Q_{7-10}$ Flow (cfs) | 15.33 | $Q_{7-10}$ Basis | USGS Gage #03007800 |
| Elevation (ft) | 1480 | Slope (ft/ft) | 0.0001 |
| Watershed No. | 16-C | Chapter 93 Class. | CWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Impaired | | |
| Cause(s) of Impairment | SILTATION | | |
| Source(s) of Impairment | GRAZING IN RIPARIAN OR SHORELINE ZONES | | |
| TMDL Status | | Name | |

| Background/Ambient Data | | Data Source |
|---|---|---|
| pH (SU) | 7.2 | WQN 860 |
| Temperature (°C) | 20 | Default (CWF) |
| Hardness (mg/L) | 33 | USGS Gage #03007800 |
| Other: | | |

| | | | |
|---|---|---|---|
| Nearest Downstream Public Water Supply Intake | | PA/NY state line | |
| PWS Waters | Allegheny River | Flow at Intake (cfs) | 37.7 |
| PWS RMI | 0 | Distance from Outfall (mi) | 25.25 |

Changes Since Last Permit Issuance: N/A

Other Comments: N/A

| Compliance History | |
|---|---|
| | |
| **Summary of DMRs:** | Twelve (12) effluent violations have been reported on eDMRs in the last five years. Nine pertaining to oil and grease and three for pH at Outfall 001. |
| **Summary of Inspections:** | The last site inspection was conducted on 1/6/2021. |

Other Comments: **A Consent Assessment of Civil Penalty (CACP) was executed on 3/14/2022 for submitting a late renewal application.**

## Compliance History

**DMR Data for Outfall 001 (from December 1, 2023 to November 30, 2024)**

| Parameter | NOV-24 | OCT-24 | SEP-24 | AUG-24 | JUL-24 | JUN-24 | MAY-24 | APR-24 | MAR-24 | FEB-24 | JAN-24 | DEC-23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow (MGD) Average Monthly | | 0.004 | 0.003 | 0.012 | 0.005 | 0.011 | 0.002 | 0.013 | 0.010 | 0.006 | 0.018 | 0.013 |
| Flow (MGD) Daily Maximum | | 0.075 | 0.045 | 0.095 | 0.024 | 0.056 | 0.009 | 0.103 | 0.092 | 0.082 | 0.168 | 0.096 |
| pH (S.U.) Minimum | | 6.9 | 6.9 | 6.7 | 6.3 | 7.1 | 8.0 | 7.9 | 7.9 | 7.88 | 7.2 | 7.2 |
| pH (S.U.) Maximum | | 7.9 | 8.2 | 8.4 | 7.3 | 8.1 | 8.6 | 8.6 | 8.3 | 8.93 | 8.9 | 8.8 |
| pH (S.U.) Other Stormwater <br/> Maximum | | | | | | 8.6 | | | | | | 9.6 |
| TSS (lbs/day) Average Monthly | | 0.01 | 0.01 | 3.1 | 0.1 | 0.1 | 0.1 | 0.7 | 0.3 | 0.01 | 0.5 | 0.1 |
| TSS (lbs/day) Daily Maximum | | 0.01 | 0.01 | 5.6 | 0.1 | 0.2 | 0.1 | 1.3 | 0.4 | 0.1 | 1.0 | 0.1 |
| TSS (mg/L) Average Monthly | | 5.0 | 5.25 | 14.75 | 5.6 | 13.0 | 5.0 | 6.5 | 8.25 | 5.75 | 5.0 | 9.5 |
| TSS (mg/L) Daily Maximum | | 5.0 | 5.5 | 21.5 | 8.0 | 21.0 | 5.0 | 8.0 | 11.5 | 6.5 | 5.0 | 14.0 |
| TSS (mg/L) Other Stormwater <br/> Maximum | | | | | | 19.5 | | | | | | < 56 |
| Oil and Grease (lbs/day) Average Monthly | | 0.01 | 0.01 | 1.0 | 0.3 | 0.2 | 0.1 | 0.7 | 0.4 | 0.1 | 0.4 | 0.09 |
| Oil and Grease (lbs/day) Weekly Average | | 0.01 | 0.01 | 1.5 | 0.4 | 0.2 | 0.1 | 1.3 | 0.2 | 0.2 | 1.2 | 0.1 |
| Oil and Grease (mg/L) Average Monthly | | 5.5 | 5.8 | 5.8 | 12.2 | 12.5 | 8.6 | 6.5 | 13.6 | 10.1 | 5.6 | 8.2 |
| Oil and Grease (mg/L) Daily Maximum | | 5.8 | 5.9 | 6.5 | 36.4 | 26.0 | 13.6 | 7.6 | 21.4 | 18.6 | 5.8 | 17.6 |
| Oil and Grease (mg/L) Other Stormwater <br/> Maximum | | | | | | 7.6 | | | | | | < 5.0 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Aluminum (mg/L) Other Stormwater <br/> Maximum | | | | | | 1.34 | | | | | | 1.50 |
| Total Iron (mg/L) Other Stormwater <br/> Maximum | | | | | | 4.06 | | | | | | 2.76 |

**DMR Data for Outfall 003 (from December 1, 2023 to November 30, 2024)**

| Parameter | NOV-24 | OCT-24 | SEP-24 | AUG-24 | JUL-24 | JUN-24 | MAY-24 | APR-24 | MAR-24 | FEB-24 | JAN-24 | DEC-23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| pH (S.U.) Maximum | | | | | | 8.5 | | | | | | 9.5 |
| TSS (mg/L) Maximum | | | | | | 11.5 | | | | | | 79.5 |
| Oil and Grease (mg/L) Maximum | | | | | | 6.3 | | | | | | < 5.0 |
| Total Aluminum (mg/L) Maximum | | | | | | < 0.200 | | | | | | 1.08 |
| Total Iron (mg/L) Maximum | | | | | | 0.316 | | | | | | 1.94 |

**DMR Data for Outfall 004 (from December 1, 2023 to November 30, 2024)**

| Parameter | NOV-24 | OCT-24 | SEP-24 | AUG-24 | JUL-24 | JUN-24 | MAY-24 | APR-24 | MAR-24 | FEB-24 | JAN-24 | DEC-23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| pH (S.U.) Maximum | | | | | | 8.5 | | | | | | 9.4 |
| TSS (mg/L) Maximum | | | | | | 12.5 | | | | | | 75.0 |
| Oil and Grease (mg/L) Maximum | | | | | | 7.8 | | | | | | 20.9 |
| Total Aluminum (mg/L) Maximum | | | | | | 0.211 | | | | | | 1.09 |
| Total Iron (mg/L) Maximum | | | | | | 0.713 | | | | | | 1.75 |

## Development of Effluent Limitations

**Outfall No.** 001 **Design Flow (MGD)** 0.072
**Latitude** 41º 48' 28.80" **Longitude** -78º 17' 16.30"
**Wastewater Description:** IW Process Effluent with ELG, Noncontact Cooling Water (NCCW), Stormwater

### Technology-Based Limitations

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

| Parameter | Limit (lbs/day) | SBC | Federal Regulation | State Regulation |
|---|---|---|---|---|
| Total Suspended Solids | 65 | Average Monthly | 40 CFR 426.82 | |
| | 130 | Daily Maximum | 40 CFR 426.82 | |
| Oil and Grease | 28 | Average Monthly | 40 CFR 426.82 | |
| | 56 | Daily Maximum | 40 CFR 426.82 | |
| Oil and Grease | 15 mg/l | Average Monthly | | 95.2(2)(ii) |
| | 30 mg/l | IMAX | | 95.2(2)(ii) |
| pH | 6.0 – 9.0 S.U. | Min – Max | 40 CFR 426.82 | 95.2(1) |

Comments:

### Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files attached):

| Parameter | Limit (ug/l) | SBC | Model |
|---|---|---|---|
| Total Copper | 86.9 | Average Monthly | Toxics Management Spreadsheet Ver. 1.4 |
| Total Copper | 136 | Daily Maximum | Toxics Management Spreadsheet Ver. 1.4 |

Comments: The TMS also recommended monitoring for total lead and total zinc. Monitoring for these two parameters will be placed in the permit at a frequency of once per month to further monitor the discharge to determine if effluent limits will be necessary in the future.

No thermal modeling was done for this permit review as application data indicates the discharge is not thermally elevated.

### Best Professional Judgment (BPJ) Limitations

Comments: Average monthly and daily maximum TSS concentration limits were reduced to 100 mg/l in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Industrial Permits."

Annual monitoring for PFAS parameters – PFOA, PFOS, PFBS, and HFPO-DA –was added to the renewed permit in accordance with Department directive under the authority of Chapter 92a.51. A footnote was also added to the proposed permit for the discontinuation of sampling requirements for PFAS parameters after four consecutive non-detects are reported for all parameters at or below the Target QLs.

Since Outfall 001 also has sources of stormwater, separate monitoring requirements will be required during qualifying rain events. See "Development of Effluent Limitations" for Outfall 003 and 004 (next page) for discussion of stormwater monitoring requirements.

### Anti-Backsliding

N/A

## Development of Effluent Limitations

| | | | |
|---|---|---|---|
| **Outfall No.** | 003 | **Design Flow (MGD)** | 0 |
| **Latitude** | 41º 48' 41.70" | **Longitude** | -78º 17' 0.87" |
| **Outfall No.** | 004 | **Design Flow (MGD)** | 0 |
| **Latitude** | 41º 48' 34.30" | **Longitude** | -78º 16' 59.30" |

**Wastewater Description:** Stormwater associated with industrial activities

### Technology-Based Limitations

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

Comments: None

### Water Quality-Based Limitations

Comments: None

### Best Professional Judgment (BPJ) Limitations

Comments: Monitoring for parameters found in Appendix N of the current PAG-03 General Permit were placed in permit in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Discharges of Industrial Waste,"

### 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" (386-0400-001), 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 | Daily Maximum | Minimum | Average Monthly | Daily Maximum | Instant. Maximum | | |
| Flow (MGD) | Report | Report | XXX | XXX | XXX | XXX | Continuous | Measured |
| pH (S.U.) | XXX | XXX | 6.0 Daily Min | XXX | 9.0 | XXX | 1/day | Grab |
| pH (S.U.)[1] | XXX | XXX | XXX | XXX | Report | XXX | 1/6 months | Grab |
| TSS | 65 | 130 | XXX | 100 | 100 | 250 | 2/month | 8-Hr Composite |
| TSS[1] | XXX | XXX | XXX | XXX | Report | XXX | 1/6 months | Grab |
| Oil and Grease | 28 | 56 | XXX | 15.0 | 30.0 | 30 | 2/month | Grab |
| Total Nitrogen[1] | XXX | XXX | XXX | XXX | Report | XXX | 1/6 months | Calculation |
| Total Phosphorus[1] | XXX | XXX | XXX | XXX | Report | XXX | 1/6 months | Grab |
| Total Aluminum[1] | XXX | XXX | XXX | XXX | Report | XXX | 1/6 months | Grab |
| Copper, Total (ug/L) | 0.052 | 0.081 | XXX | 86.9 | 136.0 | 217 | 1/week | Grab |
| Total Iron[1] | XXX | XXX | XXX | XXX | Report | XXX | 1/6 months | Grab |
| Lead, Total (ug/L) | XXX | Report | XXX | XXX | Report | XXX | 1/month | Grab |
| Zinc, Total (ug/L) | XXX | Report | XXX | XXX | Report | XXX | 1/month | Grab |
| PFOA (ng/L) | XXX | XXX | XXX | XXX | Report | XXX | 1/year | Grab |

**Outfall 001, Continued (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 | Daily Maximum | Minimum | Average Monthly | Daily Maximum | Instant. Maximum | | |
| PFOS (ng/L) | XXX | XXX | XXX | XXX | Report | XXX | 1/year | Grab |
| PFBS (ng/L) | XXX | XXX | XXX | XXX | Report | XXX | 1/year | Grab |
| HFPO-DA (ng/L) | XXX | XXX | XXX | XXX | Report | XXX | 1/year | Grab |

Compliance Sampling Location: Outfall 001 (after disinfection)

Other Comments: (1) – Denotes sampling requirements only during qualifying storm events.

## 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" (386-0400-001), SOPs and/or BPJ.

**Outfall 003, 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 |
| Total Nitrogen | XXX | XXX | XXX | XXX | Report | XXX | 1/6 months | Calculation |
| Total Phosphorus | 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 |

Compliance Sampling Location: Outfall 003 (prior to mixing with any other waters)

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" (386-0400-001), SOPs and/or BPJ.

**Outfall 004, 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 |
| Total Nitrogen | XXX | XXX | XXX | XXX | Report | XXX | 1/6 months | Calculation |
| Total Phosphorus | 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 |

Compliance Sampling Location: Outfall 004 (prior to mixing with any other waters)

Other Comments:

## CALCULATION OF TECHNOLOGY BASED EFFLUENT LIMITS

**Case Name:** Ardagh Glass Inc.
**NPDES # PA** 0001872
**Outfall** 001 **Wasteflow:** 0.0720 mgd

**Prepared By:** Pesek
**Date:** 1/16/2025

**Industry Category and Subcategory:** 40 CFR 426 - Subpart H - Glass Container Manufacturing
**Applicable ELG:** 40 CFR 426.82 (BPT)
**Production Rate Used and Basis For Selection:**

The Production rate chosen was the average daily output for the maximum production month for the facility's two furnaces

**Production Rate:** 933.36 tppd 466.68 tons/day

| | | | ELG Information | | | Allowable Mass Loadings (lbs/day) | | Allowable Concentrations (mg/l) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | ELG # | Level | Max 1-day | Avg 30-day | Units | Avg Monthly | Max Daily | Avg Monthly | Max Daily | Inst Max. |
| TSS | 426.82 | BPT | 0.14 | 0.07 | Lb/1000Lbs | 65.3 | 130.7 | 108.80 | 217.61 | 272 |
| Oil & Grease | 426.82 | BPT | 0.06 | 0.03 | Lb/1000Lbs | 28.0 | 56.0 | 46.63 | 93.26 | 117 |
| pH | 426.82 | BPT | 6 to 9 at all times | | | | | 6 to 9 at all times | | |

Allowable mass loadings were calculated using the production rate in Thousand Pounds Per Day (TPPD) times the ELG value.
Allowable concentrations were calculated by taking the allowable mass loading times the wasteflow flowrate times 8.34.
IMAX concentration calculated as 2.5 times the average monthly allowable concentration.

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

# Discharge Information

Instructions | Discharge | Stream

Facility: **Ardagh Glass** NPDES Permit No.: **PA0001872** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Process/NCCW/SW**

| Discharge Characteristics | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Design Flow (MGD)* | Hardness (mg/l)* | pH (SU)* | Partial Mix Factors (PMFs) | | | | Complete Mix Times (min) | |
| | | | AFC | CFC | THH | CRL | $Q_{7-10}$ | $Q_h$ |
| 0.072 | 103 | 8.4 | | | | | | |

| | | | | | *0 if left blank* | | *0.5 if left blank* | | *0 if left blank* | | | *1 if left blank* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Discharge Pollutant | Units | Max Discharge Conc | | Trib Conc | Stream Conc | Daily CV | Hourly CV | Stream CV | Fate Coeff | FOS | Criteria Mod | Chem Transl |
| Group 1 | Total Dissolved Solids (PWS) | mg/L | | 364 | | | | | | | | | |
| | Chloride (PWS) | mg/L | | 91.9 | | | | | | | | | |
| | Bromide | mg/L | | 0.222 | | | | | | | | | |
| | Sulfate (PWS) | mg/L | | 48.8 | | | | | | | | | |
| | Fluoride (PWS) | mg/L | | 0.18 | | | | | | | | | |
| Group 2 | Total Aluminum | µg/L | | 150 | | | | | | | | | |
| | Total Antimony | µg/L | | 0.848 | | | | | | | | | |
| | Total Arsenic | µg/L | | 5.65 | | | | | | | | | |
| | Total Barium | µg/L | | 41.3 | | | | | | | | | |
| | Total Beryllium | µg/L | < | 0.3 | | | | | | | | | |
| | Total Boron | µg/L | | 56 | | | | | | | | | |
| | Total Cadmium | µg/L | | 1.21 | | | | | | | | | |
| | Total Chromium (III) | µg/L | | 3 | | | | | | | | | |
| | Hexavalent Chromium | µg/L | < | 0.25 | | | | | | | | | |
| | Total Cobalt | µg/L | | 0.582 | | | | | | | | | |
| | Total Copper | µg/L | | 60 | | | | | | | | | |
| | Free Cyanide | µg/L | | 13 | | | | | | | | | |
| | Total Cyanide | µg/L | | 13 | | | | | | | | | |
| | Dissolved Iron | µg/L | | 30 | | | | | | | | | |
| | Total Iron | µg/L | | 2790 | | | | | | | | | |
| | Total Lead | µg/L | | 16.7 | | | | | | | | | |
| | Total Manganese | µg/L | | 16 | | | | | | | | | |
| | Total Mercury | µg/L | < | 0.0002 | | | | | | | | | |
| | Total Nickel | µg/L | | 67.5 | | | | | | | | | |
| | Total Phenols (Phenolics) (PWS) | µg/L | | 7.1 | | | | | | | | | |
| | Total Selenium | µg/L | | 54.9 | | | | | | | | | |
| | Total Silver | µg/L | < | 0.8 | | | | | | | | | |
| | Total Thallium | µg/L | < | 0.8 | | | | | | | | | |
| | Total Zinc | µg/L | | 160 | | | | | | | | | |
| | Total Molybdenum | µg/L | | 6.43 | | | | | | | | | |
| | Acrolein | µg/L | < | 10 | | | | | | | | | |
| | Acrylamide | µg/L | < | | | | | | | | | | |
| | Acrylonitrile | µg/L | < | 5 | | | | | | | | | |
| | Benzene | µg/L | < | 1 | | | | | | | | | |
| | Bromoform | µg/L | | 5.79 | | | | | | | | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Group 3 | Carbon Tetrachloride | µg/L | < | 1 | | | | | | | | | |
| | Chlorobenzene | µg/L | < | 1 | | | | | | | | | |
| | Chlorodibromomethane | µg/L | | 3.19 | | | | | | | | | |
| | Chloroethane | µg/L | < | 1 | | | | | | | | | |
| | 2-Chloroethyl Vinyl Ether | µg/L | < | 5 | | | | | | | | | |
| | Chloroform | µg/L | < | 1 | | | | | | | | | |
| | Dichlorobromomethane | µg/L | | 1.08 | | | | | | | | | |
| | 1,1-Dichloroethane | µg/L | < | 1 | | | | | | | | | |
| | 1,2-Dichloroethane | µg/L | < | 1 | | | | | | | | | |
| | 1,1-Dichloroethylene | µg/L | < | 1 | | | | | | | | | |
| | 1,2-Dichloropropane | µg/L | < | 1 | | | | | | | | | |
| | 1,3-Dichloropropylene | µg/L | < | 1 | | | | | | | | | |
| | 1,4-Dioxane | µg/L | < | 100 | | | | | | | | | |
| | Ethylbenzene | µg/L | < | 1 | | | | | | | | | |
| | Methyl Bromide | µg/L | < | 1 | | | | | | | | | |
| | Methyl Chloride | µg/L | < | 1 | | | | | | | | | |
| | Methylene Chloride | µg/L | < | 1 | | | | | | | | | |
| | 1,1,2,2-Tetrachloroethane | µg/L | < | 1 | | | | | | | | | |
| | Tetrachloroethylene | µg/L | < | 1 | | | | | | | | | |
| | Toluene | µg/L | < | 1 | | | | | | | | | |
| | 1,2-trans-Dichloroethylene | µg/L | < | 1 | | | | | | | | | |
| | 1,1,1-Trichloroethane | µg/L | < | 1 | | | | | | | | | |
| | 1,1,2-Trichloroethane | µg/L | < | 1 | | | | | | | | | |
| | Trichloroethylene | µg/L | < | 1 | | | | | | | | | |
| | Vinyl Chloride | µg/L | < | 1 | | | | | | | | | |
| Group 4 | 2-Chlorophenol | µg/L | < | | | | | | | | | | |
| | 2,4-Dichlorophenol | µg/L | < | | | | | | | | | | |
| | 2,4-Dimethylphenol | µg/L | < | | | | | | | | | | |
| | 4,6-Dinitro-o-Cresol | µg/L | < | | | | | | | | | | |
| | 2,4-Dinitrophenol | µg/L | < | | | | | | | | | | |
| | 2-Nitrophenol | µg/L | < | | | | | | | | | | |
| | 4-Nitrophenol | µg/L | < | | | | | | | | | | |
| | p-Chloro-m-Cresol | µg/L | < | | | | | | | | | | |
| | Pentachlorophenol | µg/L | < | | | | | | | | | | |
| | Phenol | µg/L | < | | | | | | | | | | |
| | 2,4,6-Trichlorophenol | µg/L | < | | | | | | | | | | |
| Group 5 | Acenaphthene | µg/L | < | 5.32 | | | | | | | | | |
| | Acenaphthylene | µg/L | < | 5.32 | | | | | | | | | |
| | Anthracene | µg/L | < | 5.32 | | | | | | | | | |
| | Benzidine | µg/L | < | 26.6 | | | | | | | | | |
| | Benzo(a)Anthracene | µg/L | < | 2.5 | | | | | | | | | |
| | Benzo(a)Pyrene | µg/L | < | 2.5 | | | | | | | | | |
| | 3,4-Benzofluoranthene | µg/L | < | 2.5 | | | | | | | | | |
| | Benzo(ghi)Perylene | µg/L | < | 5.32 | | | | | | | | | |
| | Benzo(k)Fluoranthene | µg/L | < | 2.5 | | | | | | | | | |
| | Bis(2-Chloroethoxy)Methane | µg/L | < | 5.32 | | | | | | | | | |
| | Bis(2-Chloroethyl)Ether | µg/L | < | 5.32 | | | | | | | | | |
| | Bis(2-Chloroisopropyl)Ether | µg/L | < | 5.32 | | | | | | | | | |
| | Bis(2-Ethylhexyl)Phthalate | µg/L | < | 5.32 | | | | | | | | | |
| | 4-Bromophenyl Phenyl Ether | µg/L | < | 5.32 | | | | | | | | | |
| | Butyl Benzyl Phthalate | µg/L | < | 5 | | | | | | | | | |
| | 2-Chloronaphthalene | µg/L | < | 5.32 | | | | | | | | | |
| | 4-Chlorophenyl Phenyl Ether | µg/L | < | 5.32 | | | | | | | | | |
| | Chrysene | µg/L | < | 5.32 | | | | | | | | | |
| | Dibenzo(a,h)Anthrancene | µg/L | < | 2.5 | | | | | | | | | |
| | 1,2-Dichlorobenzene | µg/L | < | 5.32 | | | | | | | | | |
| | 1,3-Dichlorobenzene | µg/L | < | 5.32 | | | | | | | | | |
| | 1,4-Dichlorobenzene | µg/L | < | 5.32 | | | | | | | | | |
| | 3,3-Dichlorobenzidine | µg/L | < | 5 | | | | | | | | | |
| | Diethyl Phthalate | µg/L | < | 5.32 | | | | | | | | | |
| | Dimethyl Phthalate | µg/L | < | 5.32 | | | | | | | | | |
| | Di-n-Butyl Phthalate | µg/L | < | 5.32 | | | | | | | | | |
| | 2,4-Dinitrotoluene | µg/L | < | 5.32 | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2,6-Dinitrotoluene | µg/L | < | 5.32 | | | | | | | | | |
| | Di-n-Octyl Phthalate | µg/L | < | 5.32 | | | | | | | | | |
| | 1,2-Diphenylhydrazine | µg/L | < | 5.32 | | | | | | | | | |
| | Fluoranthene | µg/L | < | 5.32 | | | | | | | | | |
| | Fluorene | µg/L | < | 5.32 | | | | | | | | | |
| | Hexachlorobenzene | µg/L | < | 5 | | | | | | | | | |
| | Hexachlorobutadiene | µg/L | < | 0.5 | | | | | | | | | |
| | Hexachlorocyclopentadiene | µg/L | < | 10.6 | | | | | | | | | |
| | Hexachloroethane | µg/L | < | 5.32 | | | | | | | | | |
| | Indeno(1,2,3-cd)Pyrene | µg/L | < | 2.5 | | | | | | | | | |
| | Isophorone | µg/L | < | 5.32 | | | | | | | | | |
| | Naphthalene | µg/L | < | 5.32 | | | | | | | | | |
| | Nitrobenzene | µg/L | < | 5.32 | | | | | | | | | |
| | n-Nitrosodimethylamine | µg/L | < | 5 | | | | | | | | | |
| | n-Nitrosodi-n-Propylamine | µg/L | < | 5 | | | | | | | | | |
| | n-Nitrosodiphenylamine | µg/L | < | 5.32 | | | | | | | | | |
| | Phenanthrene | µg/L | < | 5.32 | | | | | | | | | |
| | Pyrene | µg/L | < | 5.32 | | | | | | | | | |
| | 1,2,4-Trichlorobenzene | µg/L | < | 0.5 | | | | | | | | | |
| Group 6 | Aldrin | µg/L | < | | | | | | | | | | |
| | alpha-BHC | µg/L | < | | | | | | | | | | |
| | beta-BHC | µg/L | < | | | | | | | | | | |
| | gamma-BHC | µg/L | < | | | | | | | | | | |
| | delta BHC | µg/L | < | | | | | | | | | | |
| | Chlordane | µg/L | < | | | | | | | | | | |
| | 4,4-DDT | µg/L | < | | | | | | | | | | |
| | 4,4-DDE | µg/L | < | | | | | | | | | | |
| | 4,4-DDD | µg/L | < | | | | | | | | | | |
| | Dieldrin | µg/L | < | | | | | | | | | | |
| | alpha-Endosulfan | µg/L | < | | | | | | | | | | |
| | beta-Endosulfan | µg/L | < | | | | | | | | | | |
| | Endosulfan Sulfate | µg/L | < | | | | | | | | | | |
| | Endrin | µg/L | < | | | | | | | | | | |
| | Endrin Aldehyde | µg/L | < | | | | | | | | | | |
| | Heptachlor | µg/L | < | | | | | | | | | | |
| | Heptachlor Epoxide | µg/L | < | | | | | | | | | | |
| | PCB-1016 | µg/L | < | | | | | | | | | | |
| | PCB-1221 | µg/L | < | | | | | | | | | | |
| | PCB-1232 | µg/L | < | | | | | | | | | | |
| | PCB-1242 | µg/L | < | | | | | | | | | | |
| | PCB-1248 | µg/L | < | | | | | | | | | | |
| | PCB-1254 | µg/L | < | | | | | | | | | | |
| | PCB-1260 | µg/L | < | | | | | | | | | | |
| | PCBs, Total | µg/L | < | | | | | | | | | | |
| | Toxaphene | µg/L | < | | | | | | | | | | |
| | 2,3,7,8-TCDD | ng/L | < | | | | | | | | | | |
| Group 7 | Gross Alpha | pCi/L | | | | | | | | | | | |
| | Total Beta | pCi/L | < | | | | | | | | | | |
| | Radium 226/228 | pCi/L | < | | | | | | | | | | |
| | Total Strontium | µg/L | < | | | | | | | | | | |
| | Total Uranium | µg/L | < | | | | | | | | | | |
| | Osmotic Pressure | mOs/kg | | | | | | | | | | | |
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pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

## Stream / Surface Water Information

**Ardagh Glass, NPDES Permit No. PA0001872, Outfall 001**

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Allegheny River**

No. Reaches to Model: **1**

- (•) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

| Location | Stream Code* | RMI* | Elevation (ft)* | DA ($mi^2$)* | Slope (ft/ft) | PWS Withdrawal (MGD) | Apply Fish Criteria* |
|---|---|---|---|---|---|---|---|
| Point of Discharge | 042122 | 290.24 | 1462 | 246.88 | | | Yes |
| End of Reach 1 | 042122 | 265.24 | 1421 | 608 | | 0.1 | Yes |

$Q_{7\text{-}10}$

| Location | RMI | LFY ($cfs/mi^2$)* | Flow (cfs) | | W/D Ratio | Width (ft) | Depth (ft) | Velocity (fps) | Travel Time (days) | Tributary | | Stream | | Analysis | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Stream | Tributary | | | | | | Hardness | pH | Hardness* | pH* | Hardness | pH |
| Point of Discharge | 290.24 | 0.062 | | | | | | | | | | 33 | 7.2 | | |
| End of Reach 1 | 265.24 | 0.062 | | | | | | | | | | 33 | 7.2 | | |

$Q_h$

| Location | RMI | LFY ($cfs/mi^2$) | Flow (cfs) | | W/D Ratio | Width (ft) | Depth (ft) | Velocity (fps) | Travel Time (days) | Tributary | | Stream | | Analysis | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Stream | Tributary | | | | | | Hardness | pH | Hardness | pH | Hardness | pH |
| Point of Discharge | 290.24 | | | | | | | | | | | | | | |
| End of Reach 1 | 265.24 | | | | | | | | | | | | | | |

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Toxics Management Spreadsheet
Version 1.4, May 2023

## Model Results

**Ardagh Glass, NPDES Permit No. PA0001872, Outfall 001**

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | ◉ All ○ Inputs ○ Results ○ Limits

☑ ***Hydrodynamics***

$Q_{7\text{-}10}$

| RMI | Stream Flow (cfs) | PWS Withdrawal (cfs) | Net Stream Flow (cfs) | Discharge Analysis Flow (cfs) | Slope (ft/ft) | Depth (ft) | Width (ft) | W/D Ratio | Velocity (fps) | Travel Time (days) | Complete Mix Time (min) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 290.24 | 15.31 | | 15.31 | 0.111 | 0.00031 | 0.916 | 73.302 | 80.059 | 0.23 | 6.651 | 470.109 |
| 265.24 | 37.70 | 0.155 | 37.5413 | | | | | | | | |

$Q_h$

| RMI | Stream Flow (cfs) | PWS Withdrawal (cfs) | Net Stream Flow (cfs) | Discharge Analysis Flow (cfs) | Slope (ft/ft) | Depth (ft) | Width (ft) | W/D Ratio | Velocity (fps) | Travel Time (days) | Complete Mix Time (min) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 290.24 | 80.64 | | 80.64 | 0.111 | 0.00031 | 1.897 | 73.302 | 38.635 | 0.581 | 2.631 | 159.464 |
| 265.24 | 177.285 | 0.155 | 177.13 | | | | | | | | |

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.179 Analysis Hardness (mg/l): 35.74 Analysis pH: 7.22

| Pollutants | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chloride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Sulfate (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Fluoride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Aluminum | 0 | 0 | | 0 | 750 | 750 | 19,160 | |
| Total Antimony | 0 | 0 | | 0 | 1,100 | 1,100 | 28,102 | |
| Total Arsenic | 0 | 0 | | 0 | 340 | 340 | 8,686 | Chem Translator of 1 applied |
| Total Barium | 0 | 0 | | 0 | 21,000 | 21,000 | 536,490 | |
| Total Boron | 0 | 0 | | 0 | 8,100 | 8,100 | 206,932 | |
| Total Cadmium | 0 | 0 | | 0 | 0.740 | 0.75 | 19.1 | Chem Translator of 0.987 applied |
| Total Chromium (III) | 0 | 0 | | 0 | 245.317 | 776 | 19,833 | Chem Translator of 0.316 applied |
| Hexavalent Chromium | 0 | 0 | | 0 | 16 | 16.3 | 416 | Chem Translator of 0.982 applied |
| Total Cobalt | 0 | 0 | | 0 | 95 | 95.0 | 2,427 | |
| Total Copper | 0 | 0 | | 0 | 5.097 | 5.31 | 136 | Chem Translator of 0.96 applied |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Free Cyanide | 0 | 0 | | 0 | 22 | 22.0 | 562 | |
| Dissolved Iron | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Iron | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Lead | 0 | 0 | | 0 | 20.732 | 22.0 | 563 | Chem Translator of 0.941 applied |
| Total Manganese | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Mercury | 0 | 0 | | 0 | 1.400 | 1.65 | 42.1 | Chem Translator of 0.85 applied |
| Total Nickel | 0 | 0 | | 0 | 196.080 | 196 | 5,019 | Chem Translator of 0.998 applied |
| Total Phenols (Phenolics) (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Selenium | 0 | 0 | | 0 | N/A | N/A | N/A | Chem Translator of 0.922 applied |
| Total Silver | 0 | 0 | | 0 | 0.548 | 0.64 | 16.5 | Chem Translator of 0.85 applied |
| Total Thallium | 0 | 0 | | 0 | 65 | 65.0 | 1,661 | |
| Total Zinc | 0 | 0 | | 0 | 49.005 | 50.1 | 1,280 | Chem Translator of 0.978 applied |
| Acrolein | 0 | 0 | | 0 | 3 | 3.0 | 76.6 | |
| Acrylonitrile | 0 | 0 | | 0 | 650 | 650 | 16,606 | |
| Benzene | 0 | 0 | | 0 | 640 | 640 | 16,350 | |
| Bromoform | 0 | 0 | | 0 | 1,800 | 1,800 | 45,985 | |
| Carbon Tetrachloride | 0 | 0 | | 0 | 2,800 | 2,800 | 71,532 | |
| Chlorobenzene | 0 | 0 | | 0 | 1,200 | 1,200 | 30,657 | |
| Chlorodibromomethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 2-Chloroethyl Vinyl Ether | 0 | 0 | | 0 | 18,000 | 18,000 | 459,849 | |
| Chloroform | 0 | 0 | | 0 | 1,900 | 1,900 | 48,540 | |
| Dichlorobromomethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2-Dichloroethane | 0 | 0 | | 0 | 15,000 | 15,000 | 383,207 | |
| 1,1-Dichloroethylene | 0 | 0 | | 0 | 7,500 | 7,500 | 191,604 | |
| 1,2-Dichloropropane | 0 | 0 | | 0 | 11,000 | 11,000 | 281,019 | |
| 1,3-Dichloropropylene | 0 | 0 | | 0 | 310 | 310 | 7,920 | |
| Ethylbenzene | 0 | 0 | | 0 | 2,900 | 2,900 | 74,087 | |
| Methyl Bromide | 0 | 0 | | 0 | 550 | 550 | 14,051 | |
| Methyl Chloride | 0 | 0 | | 0 | 28,000 | 28,000 | 715,321 | |
| Methylene Chloride | 0 | 0 | | 0 | 12,000 | 12,000 | 306,566 | |
| 1,1,2,2-Tetrachloroethane | 0 | 0 | | 0 | 1,000 | 1,000 | 25,547 | |
| Tetrachloroethylene | 0 | 0 | | 0 | 700 | 700 | 17,883 | |
| Toluene | 0 | 0 | | 0 | 1,700 | 1,700 | 43,430 | |
| 1,2-trans-Dichloroethylene | 0 | 0 | | 0 | 6,800 | 6,800 | 173,721 | |
| 1,1,1-Trichloroethane | 0 | 0 | | 0 | 3,000 | 3,000 | 76,641 | |
| 1,1,2-Trichloroethane | 0 | 0 | | 0 | 3,400 | 3,400 | 86,860 | |
| Trichloroethylene | 0 | 0 | | 0 | 2,300 | 2,300 | 58,758 | |
| Vinyl Chloride | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Acenaphthene | 0 | 0 | | 0 | 83 | 83.0 | 2,120 | |
| Anthracene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Benzidine | 0 | 0 | | 0 | 300 | 300 | 7,664 | |
| Benzo(a)Anthracene | 0 | 0 | | 0 | 0.5 | 0.5 | 12.8 | |
| Benzo(a)Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 3,4-Benzofluoranthene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Benzo(k)Fluoranthene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Bis(2-Chloroethyl)Ether | 0 | 0 | | 0 | 30,000 | 30,000 | 766,415 | |
| Bis(2-Chloroisopropyl)Ether | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Bis(2-Ethylhexyl)Phthalate | 0 | 0 | | 0 | 4,500 | 4,500 | 114,962 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 4-Bromophenyl Phenyl Ether | 0 | 0 | | 0 | 270 | 270 | 6,898 | |
| Butyl Benzyl Phthalate | 0 | 0 | | 0 | 140 | 140 | 3,577 | |
| 2-Chloronaphthalene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chrysene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Dibenzo(a,h)Anthrancene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2-Dichlorobenzene | 0 | 0 | | 0 | 820 | 820 | 20,949 | |
| 1,3-Dichlorobenzene | 0 | 0 | | 0 | 350 | 350 | 8,942 | |
| 1,4-Dichlorobenzene | 0 | 0 | | 0 | 730 | 730 | 18,649 | |
| 3,3-Dichlorobenzidine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Diethyl Phthalate | 0 | 0 | | 0 | 4,000 | 4,000 | 102,189 | |
| Dimethyl Phthalate | 0 | 0 | | 0 | 2,500 | 2,500 | 63,868 | |
| Di-n-Butyl Phthalate | 0 | 0 | | 0 | 110 | 110 | 2,810 | |
| 2,4-Dinitrotoluene | 0 | 0 | | 0 | 1,600 | 1,600 | 40,875 | |
| 2,6-Dinitrotoluene | 0 | 0 | | 0 | 990 | 990 | 25,292 | |
| 1,2-Diphenylhydrazine | 0 | 0 | | 0 | 15 | 15.0 | 383 | |
| Fluoranthene | 0 | 0 | | 0 | 200 | 200 | 5,109 | |
| Fluorene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Hexachlorobenzene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Hexachlorobutadiene | 0 | 0 | | 0 | 10 | 10.0 | 255 | |
| Hexachlorocyclopentadiene | 0 | 0 | | 0 | 5 | 5.0 | 128 | |
| Hexachloroethane | 0 | 0 | | 0 | 60 | 60.0 | 1,533 | |
| Indeno(1,2,3-cd)Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Isophorone | 0 | 0 | | 0 | 10,000 | 10,000 | 255,472 | |
| Naphthalene | 0 | 0 | | 0 | 140 | 140 | 3,577 | |
| Nitrobenzene | 0 | 0 | | 0 | 4,000 | 4,000 | 102,189 | |
| n-Nitrosodimethylamine | 0 | 0 | | 0 | 17,000 | 17,000 | 434,302 | |
| n-Nitrosodi-n-Propylamine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| n-Nitrosodiphenylamine | 0 | 0 | | 0 | 300 | 300 | 7,664 | |
| Phenanthrene | 0 | 0 | | 0 | 5 | 5.0 | 128 | |
| Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2,4-Trichlorobenzene | 0 | 0 | | 0 | 130 | 130 | 3,321 | |

☑ ***CFC*** CCT (min): ###### PMF: 1 Analysis Hardness (mg/l): 33.506 Analysis pH: 7.20

| Pollutants | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chloride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Sulfate (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Fluoride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Aluminum | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Antimony | 0 | 0 | | 0 | 220 | 220 | 30,453 | |
| Total Arsenic | 0 | 0 | | 0 | 150 | 150 | 20,763 | Chem Translator of 1 applied |
| Total Barium | 0 | 0 | | 0 | 4,100 | 4,100 | 567,528 | |
| Total Boron | 0 | 0 | | 0 | 1,600 | 1,600 | 221,474 | |
| Total Cadmium | 0 | 0 | | 0 | 0.115 | 0.12 | 16.7 | Chem Translator of 0.955 applied |
| Total Chromium (III) | 0 | 0 | | 0 | 30.267 | 35.2 | 4,872 | Chem Translator of 0.86 applied |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0 | 0 | | 0 | 10 | 10.4 | 1,439 | Chem Translator of 0.962 applied |
| Total Cobalt | 0 | 0 | | 0 | 19 | 19.0 | 2,630 | |
| Total Copper | 0 | 0 | | 0 | 3.518 | 3.66 | 507 | Chem Translator of 0.96 applied |
| Free Cyanide | 0 | 0 | | 0 | 5.2 | 5.2 | 720 | |
| Dissolved Iron | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Iron | 0 | 0 | | 0 | 1,500 | 1,500 | 207,632 | WQC = 30 day average; PMF = 1 |
| Total Lead | 0 | 0 | | 0 | 0.752 | 0.79 | 109 | Chem Translator of 0.95 applied |
| Total Manganese | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Mercury | 0 | 0 | | 0 | 0.770 | 0.91 | 125 | Chem Translator of 0.85 applied |
| Total Nickel | 0 | 0 | | 0 | 20.621 | 20.7 | 2,863 | Chem Translator of 0.997 applied |
| Total Phenols (Phenolics) (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Selenium | 0 | 0 | | 0 | 4.600 | 4.99 | 691 | Chem Translator of 0.922 applied |
| Total Silver | 0 | 0 | | 0 | N/A | N/A | N/A | Chem Translator of 1 applied |
| Total Thallium | 0 | 0 | | 0 | 13 | 13.0 | 1,799 | |
| Total Zinc | 0 | 0 | | 0 | 46.776 | 47.4 | 6,567 | Chem Translator of 0.986 applied |
| Acrolein | 0 | 0 | | 0 | 3 | 3.0 | 415 | |
| Acrylonitrile | 0 | 0 | | 0 | 130 | 130 | 17,995 | |
| Benzene | 0 | 0 | | 0 | 130 | 130 | 17,995 | |
| Bromoform | 0 | 0 | | 0 | 370 | 370 | 51,216 | |
| Carbon Tetrachloride | 0 | 0 | | 0 | 560 | 560 | 77,516 | |
| Chlorobenzene | 0 | 0 | | 0 | 240 | 240 | 33,221 | |
| Chlorodibromomethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 2-Chloroethyl Vinyl Ether | 0 | 0 | | 0 | 3,500 | 3,500 | 484,475 | |
| Chloroform | 0 | 0 | | 0 | 390 | 390 | 53,984 | |
| Dichlorobromomethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2-Dichloroethane | 0 | 0 | | 0 | 3,100 | 3,100 | 429,107 | |
| 1,1-Dichloroethylene | 0 | 0 | | 0 | 1,500 | 1,500 | 207,632 | |
| 1,2-Dichloropropane | 0 | 0 | | 0 | 2,200 | 2,200 | 304,527 | |
| 1,3-Dichloropropylene | 0 | 0 | | 0 | 61 | 61.0 | 8,444 | |
| Ethylbenzene | 0 | 0 | | 0 | 580 | 580 | 80,284 | |
| Methyl Bromide | 0 | 0 | | 0 | 110 | 110 | 15,226 | |
| Methyl Chloride | 0 | 0 | | 0 | 5,500 | 5,500 | 761,318 | |
| Methylene Chloride | 0 | 0 | | 0 | 2,400 | 2,400 | 332,212 | |
| 1,1,2,2-Tetrachloroethane | 0 | 0 | | 0 | 210 | 210 | 29,069 | |
| Tetrachloroethylene | 0 | 0 | | 0 | 140 | 140 | 19,379 | |
| Toluene | 0 | 0 | | 0 | 330 | 330 | 45,679 | |
| 1,2-trans-Dichloroethylene | 0 | 0 | | 0 | 1,400 | 1,400 | 193,790 | |
| 1,1,1-Trichloroethane | 0 | 0 | | 0 | 610 | 610 | 84,437 | |
| 1,1,2-Trichloroethane | 0 | 0 | | 0 | 680 | 680 | 94,127 | |
| Trichloroethylene | 0 | 0 | | 0 | 450 | 450 | 62,290 | |
| Vinyl Chloride | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Acenaphthene | 0 | 0 | | 0 | 17 | 17.0 | 2,353 | |
| Anthracene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Benzidine | 0 | 0 | | 0 | 59 | 59.0 | 8,167 | |
| Benzo(a)Anthracene | 0 | 0 | | 0 | 0.1 | 0.1 | 13.8 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Benzo(a)Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 3,4-Benzofluoranthene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Benzo(k)Fluoranthene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Bis(2-Chloroethyl)Ether | 0 | 0 | | 0 | 6,000 | 6,000 | 830,529 | |
| Bis(2-Chloroisopropyl)Ether | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Bis(2-Ethylhexyl)Phthalate | 0 | 0 | | 0 | 910 | 910 | 125,964 | |
| 4-Bromophenyl Phenyl Ether | 0 | 0 | | 0 | 54 | 54.0 | 7,475 | |
| Butyl Benzyl Phthalate | 0 | 0 | | 0 | 35 | 35.0 | 4,845 | |
| 2-Chloronaphthalene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chrysene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Dibenzo(a,h)Anthrancene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2-Dichlorobenzene | 0 | 0 | | 0 | 160 | 160 | 22,147 | |
| 1,3-Dichlorobenzene | 0 | 0 | | 0 | 69 | 69.0 | 9,551 | |
| 1,4-Dichlorobenzene | 0 | 0 | | 0 | 150 | 150 | 20,763 | |
| 3,3-Dichlorobenzidine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Diethyl Phthalate | 0 | 0 | | 0 | 800 | 800 | 110,737 | |
| Dimethyl Phthalate | 0 | 0 | | 0 | 500 | 500 | 69,211 | |
| Di-n-Butyl Phthalate | 0 | 0 | | 0 | 21 | 21.0 | 2,907 | |
| 2,4-Dinitrotoluene | 0 | 0 | | 0 | 320 | 320 | 44,295 | |
| 2,6-Dinitrotoluene | 0 | 0 | | 0 | 200 | 200 | 27,684 | |
| 1,2-Diphenylhydrazine | 0 | 0 | | 0 | 3 | 3.0 | 415 | |
| Fluoranthene | 0 | 0 | | 0 | 40 | 40.0 | 5,537 | |
| Fluorene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Hexachlorobenzene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Hexachlorobutadiene | 0 | 0 | | 0 | 2 | 2.0 | 277 | |
| Hexachlorocyclopentadiene | 0 | 0 | | 0 | 1 | 1.0 | 138 | |
| Hexachloroethane | 0 | 0 | | 0 | 12 | 12.0 | 1,661 | |
| Indeno(1,2,3-cd)Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Isophorone | 0 | 0 | | 0 | 2,100 | 2,100 | 290,685 | |
| Naphthalene | 0 | 0 | | 0 | 43 | 43.0 | 5,952 | |
| Nitrobenzene | 0 | 0 | | 0 | 810 | 810 | 112,121 | |
| n-Nitrosodimethylamine | 0 | 0 | | 0 | 3,400 | 3,400 | 470,633 | |
| n-Nitrosodi-n-Propylamine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| n-Nitrosodiphenylamine | 0 | 0 | | 0 | 59 | 59.0 | 8,167 | |
| Phenanthrene | 0 | 0 | | 0 | 1 | 1.0 | 138 | |
| Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2,4-Trichlorobenzene | 0 | 0 | | 0 | 26 | 26.0 | 3,599 | |

☑ ***THH*** CCT (min): ###### THH PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A PWS PMF: 1

| Pollutants | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (PWS) | 0 | 0 | | 0 | 500,000 | 500,000 | ######### | WQC applied at RMI 285.24 with a design stream flow of 37.696 |
| Chloride (PWS) | 0 | 0 | | 0 | 250,000 | 250,000 | 84,858,202 | WQC applied at RMI 285.24 with a design stream flow of 37.696 |
| Sulfate (PWS) | 0 | 0 | | 0 | 250,000 | 250,000 | 84,858,202 | WQC applied at RMI 285.24 with a design stream flow of 37.696 cfs |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Fluoride (PWS) | 0 | 0 | | 0 | 2,000 | 2,000 | 678,866 | WQC applied at RMI 265.24 with a design stream flow of 37.696 cfs |
| Total Aluminum | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Antimony | 0 | 0 | | 0 | 5.6 | 5.6 | 775 | |
| Total Arsenic | 0 | 0 | | 0 | 10 | 10.0 | 1,384 | |
| Total Barium | 0 | 0 | | 0 | 2,400 | 2,400 | 332,212 | |
| Total Boron | 0 | 0 | | 0 | 3,100 | 3,100 | 429,107 | |
| Total Cadmium | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Chromium (III) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Hexavalent Chromium | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Cobalt | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Copper | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Free Cyanide | 0 | 0 | | 0 | 4 | 4.0 | 554 | |
| Dissolved Iron | 0 | 0 | | 0 | 300 | 300 | 41,526 | |
| Total Iron | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Lead | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Manganese | 0 | 0 | | 0 | 1,000 | 1,000 | 138,422 | |
| Total Mercury | 0 | 0 | | 0 | 0.050 | 0.05 | 6.92 | |
| Total Nickel | 0 | 0 | | 0 | 610 | 610 | 84,437 | |
| Total Phenols (Phenolics) (PWS) | 0 | 0 | | 0 | 5 | 5.0 | 1,697 | WQC applied at RMI 265.24 with a design stream flow of 37.696 cfs |
| Total Selenium | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Silver | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Thallium | 0 | 0 | | 0 | 0.24 | 0.24 | 33.2 | |
| Total Zinc | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Acrolein | 0 | 0 | | 0 | 3 | 3.0 | 415 | |
| Acrylonitrile | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Benzene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Bromoform | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Carbon Tetrachloride | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chlorobenzene | 0 | 0 | | 0 | 100 | 100.0 | 13,842 | |
| Chlorodibromomethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 2-Chloroethyl Vinyl Ether | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chloroform | 0 | 0 | | 0 | 5.7 | 5.7 | 789 | |
| Dichlorobromomethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2-Dichloroethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,1-Dichloroethylene | 0 | 0 | | 0 | 33 | 33.0 | 4,568 | |
| 1,2-Dichloropropane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,3-Dichloropropylene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Ethylbenzene | 0 | 0 | | 0 | 68 | 68.0 | 9,413 | |
| Methyl Bromide | 0 | 0 | | 0 | 100 | 100.0 | 13,842 | |
| Methyl Chloride | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Methylene Chloride | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,1,2,2-Tetrachloroethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Tetrachloroethylene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Toluene | 0 | 0 | | 0 | 57 | 57.0 | 7,890 | |
| 1,2-trans-Dichloroethylene | 0 | 0 | | 0 | 100 | 100.0 | 13,842 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0 | 0 | | 0 | 10,000 | 10,000 | 1,384,215 | |
| 1,1,2-Trichloroethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Trichloroethylene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Vinyl Chloride | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Acenaphthene | 0 | 0 | | 0 | 70 | 70.0 | 9,690 | |
| Anthracene | 0 | 0 | | 0 | 300 | 300 | 41,526 | |
| Benzidine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Benzo(a)Anthracene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Benzo(a)Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 3,4-Benzofluoranthene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Benzo(k)Fluoranthene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Bis(2-Chloroethyl)Ether | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Bis(2-Chloroisopropyl)Ether | 0 | 0 | | 0 | 200 | 200 | 27,684 | |
| Bis(2-Ethylhexyl)Phthalate | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 4-Bromophenyl Phenyl Ether | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Butyl Benzyl Phthalate | 0 | 0 | | 0 | 0.1 | 0.1 | 13.8 | |
| 2-Chloronaphthalene | 0 | 0 | | 0 | 800 | 800 | 110,737 | |
| Chrysene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Dibenzo(a,h)Anthrancene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2-Dichlorobenzene | 0 | 0 | | 0 | 1,000 | 1,000 | 138,422 | |
| 1,3-Dichlorobenzene | 0 | 0 | | 0 | 7 | 7.0 | 969 | |
| 1,4-Dichlorobenzene | 0 | 0 | | 0 | 300 | 300 | 41,526 | |
| 3,3-Dichlorobenzidine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Diethyl Phthalate | 0 | 0 | | 0 | 600 | 600 | 83,053 | |
| Dimethyl Phthalate | 0 | 0 | | 0 | 2,000 | 2,000 | 276,843 | |
| Di-n-Butyl Phthalate | 0 | 0 | | 0 | 20 | 20.0 | 2,768 | |
| 2,4-Dinitrotoluene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 2,6-Dinitrotoluene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2-Diphenylhydrazine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Fluoranthene | 0 | 0 | | 0 | 20 | 20.0 | 2,768 | |
| Fluorene | 0 | 0 | | 0 | 50 | 50.0 | 6,921 | |
| Hexachlorobenzene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Hexachlorobutadiene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Hexachlorocyclopentadiene | 0 | 0 | | 0 | 4 | 4.0 | 554 | |
| Hexachloroethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Indeno(1,2,3-cd)Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Isophorone | 0 | 0 | | 0 | 34 | 34.0 | 4,706 | |
| Naphthalene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Nitrobenzene | 0 | 0 | | 0 | 10 | 10.0 | 1,384 | |
| n-Nitrosodimethylamine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| n-Nitrosodi-n-Propylamine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| n-Nitrosodiphenylamine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Phenanthrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Pyrene | 0 | 0 | | 0 | 20 | 20.0 | 2,768 | |
| 1,2,4-Trichlorobenzene | 0 | 0 | | 0 | 0.07 | 0.07 | 9.69 | |

☑ ***CRL*** CCT (min): ###### PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

| Pollutants | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chloride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Sulfate (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Fluoride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Aluminum | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Antimony | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Arsenic | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Barium | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Boron | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Cadmium | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Chromium (III) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Hexavalent Chromium | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Cobalt | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Copper | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Free Cyanide | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Dissolved Iron | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Iron | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Lead | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Manganese | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Mercury | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Nickel | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Phenols (Phenolics) (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Selenium | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Silver | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Thallium | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Zinc | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Acrolein | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Acrylonitrile | 0 | 0 | | 0 | 0.06 | 0.06 | 43.5 | |
| Benzene | 0 | 0 | | 0 | 0.58 | 0.58 | 421 | |
| Bromoform | 0 | 0 | | 0 | 7 | 7.0 | 5,075 | |
| Carbon Tetrachloride | 0 | 0 | | 0 | 0.4 | 0.4 | 290 | |
| Chlorobenzene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chlorodibromomethane | 0 | 0 | | 0 | 0.8 | 0.8 | 580 | |
| 2-Chloroethyl Vinyl Ether | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chloroform | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Dichlorobromomethane | 0 | 0 | | 0 | 0.95 | 0.95 | 689 | |
| 1,2-Dichloroethane | 0 | 0 | | 0 | 9.9 | 9.9 | 7,178 | |
| 1,1-Dichloroethylene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2-Dichloropropane | 0 | 0 | | 0 | 0.9 | 0.9 | 653 | |
| 1,3-Dichloropropylene | 0 | 0 | | 0 | 0.27 | 0.27 | 196 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Methyl Bromide | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Methyl Chloride | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Methylene Chloride | 0 | 0 | | 0 | 20 | 20.0 | 14,500 | |
| 1,1,2,2-Tetrachloroethane | 0 | 0 | | 0 | 0.2 | 0.2 | 145 | |
| Tetrachloroethylene | 0 | 0 | | 0 | 10 | 10.0 | 7,250 | |
| Toluene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2-trans-Dichloroethylene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,1,1-Trichloroethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,1,2-Trichloroethane | 0 | 0 | | 0 | 0.55 | 0.55 | 399 | |
| Trichloroethylene | 0 | 0 | | 0 | 0.6 | 0.6 | 435 | |
| Vinyl Chloride | 0 | 0 | | 0 | 0.02 | 0.02 | 14.5 | |
| Acenaphthene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Anthracene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Benzidine | 0 | 0 | | 0 | 0.0001 | 0.0001 | 0.073 | |
| Benzo(a)Anthracene | 0 | 0 | | 0 | 0.001 | 0.001 | 0.73 | |
| Benzo(a)Pyrene | 0 | 0 | | 0 | 0.0001 | 0.0001 | 0.073 | |
| 3,4-Benzofluoranthene | 0 | 0 | | 0 | 0.001 | 0.001 | 0.73 | |
| Benzo(k)Fluoranthene | 0 | 0 | | 0 | 0.01 | 0.01 | 7.25 | |
| Bis(2-Chloroethyl)Ether | 0 | 0 | | 0 | 0.03 | 0.03 | 21.8 | |
| Bis(2-Chloroisopropyl)Ether | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Bis(2-Ethylhexyl)Phthalate | 0 | 0 | | 0 | 0.32 | 0.32 | 232 | |
| 4-Bromophenyl Phenyl Ether | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Butyl Benzyl Phthalate | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 2-Chloronaphthalene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chrysene | 0 | 0 | | 0 | 0.12 | 0.12 | 87.0 | |
| Dibenzo(a,h)Anthrancene | 0 | 0 | | 0 | 0.0001 | 0.0001 | 0.073 | |
| 1,2-Dichlorobenzene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,3-Dichlorobenzene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,4-Dichlorobenzene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 3,3-Dichlorobenzidine | 0 | 0 | | 0 | 0.05 | 0.05 | 36.3 | |
| Diethyl Phthalate | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Dimethyl Phthalate | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Di-n-Butyl Phthalate | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 2,4-Dinitrotoluene | 0 | 0 | | 0 | 0.05 | 0.05 | 36.3 | |
| 2,6-Dinitrotoluene | 0 | 0 | | 0 | 0.05 | 0.05 | 36.3 | |
| 1,2-Diphenylhydrazine | 0 | 0 | | 0 | 0.03 | 0.03 | 21.8 | |
| Fluoranthene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Fluorene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Hexachlorobenzene | 0 | 0 | | 0 | 0.00008 | 0.00008 | 0.058 | |
| Hexachlorobutadiene | 0 | 0 | | 0 | 0.01 | 0.01 | 7.25 | |
| Hexachlorocyclopentadiene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Hexachloroethane | 0 | 0 | | 0 | 0.1 | 0.1 | 72.5 | |
| Indeno(1,2,3-cd)Pyrene | 0 | 0 | | 0 | 0.001 | 0.001 | 0.73 | |
| Isophorone | 0 | 0 | | 0 | N/A | N/A | N/A | |

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|---|---|---|---|---|---|---|---|---|
| Naphthalene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Nitrobenzene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| n-Nitrosodimethylamine | 0 | 0 | | 0 | 0.0007 | 0.0007 | 0.51 | |
| n-Nitrosodi-n-Propylamine | 0 | 0 | | 0 | 0.005 | 0.005 | 3.63 | |
| n-Nitrosodiphenylamine | 0 | 0 | | 0 | 3.3 | 3.3 | 2,393 | |
| Phenanthrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2,4-Trichlorobenzene | 0 | 0 | | 0 | N/A | N/A | N/A | |

☑ ***Recommended WQBELs & Monitoring Requirements***

**No. Samples/Month:** 4

| | *Mass Limits* | | *Concentration Limits* | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Pollutants | AML (lbs/day) | MDL (lbs/day) | AML | MDL | IMAX | Units | Governing WQBEL | WQBEL Basis | Comments |
| Total Copper | 0.052 | 0.081 | 86.9 | 136 | 217 | µg/L | 86.9 | AFC | Discharge Conc ≥ 50% WQBEL (RP) |
| Total Lead | Report | Report | Report | Report | Report | µg/L | 109 | CFC | Discharge Conc > 10% WQBEL (no RP) |
| Total Zinc | Report | Report | Report | Report | Report | µg/L | 820 | AFC | Discharge Conc > 10% WQBEL (no RP) |
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☑ ***Other Pollutants without Limits or Monitoring***

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

| Pollutants | Governing WQBEL | Units | Comments |
|---|---|---|---|
| Total Dissolved Solids (PWS) | 169,716 | mg/L | Discharge Conc ≤ 10% WQBEL |
| Chloride (PWS) | 84,858 | mg/L | Discharge Conc ≤ 10% WQBEL |
| Bromide | N/A | N/A | No WQS |
| Sulfate (PWS) | 84,858 | mg/L | Discharge Conc ≤ 10% WQBEL |
| Fluoride (PWS) | 679 | mg/L | Discharge Conc ≤ 10% WQBEL |
| Total Aluminum | 12,281 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Antimony | 775 | µg/L | Discharge Conc ≤ 10% WQBEL |

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|---|---|---|---|
| Total Arsenic | 1,384 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Barium | 332,212 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Beryllium | N/A | N/A | No WQS |
| Total Boron | 132,635 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Cadmium | 12.3 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Chromium (III) | 4,872 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Hexavalent Chromium | 267 | µg/L | Discharge Conc < TQL |
| Total Cobalt | 1,556 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Free Cyanide | 360 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Total Cyanide | N/A | N/A | No WQS |
| Dissolved Iron | 41,526 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Iron | 207,632 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Manganese | 138,422 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Mercury | 6.92 | µg/L | Discharge Conc < TQL |
| Total Nickel | 2,863 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Phenols (Phenolics) (PWS) | 1,697 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Selenium | 691 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Silver | 10.6 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Thallium | 33.2 | µg/L | Discharge Conc < TQL |
| Total Molybdenum | N/A | N/A | No WQS |
| Acrolein | 49.1 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Acrylonitrile | 43.5 | µg/L | Discharge Conc < TQL |
| Benzene | 421 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Bromoform | 5,075 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Carbon Tetrachloride | 290 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Chlorobenzene | 13,842 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Chlorodibromomethane | 580 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Chloroethane | N/A | N/A | No WQS |
| 2-Chloroethyl Vinyl Ether | 294,745 | µg/L | Discharge Conc < TQL |
| Chloroform | 789 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Dichlorobromomethane | 689 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 1,1-Dichloroethane | N/A | N/A | No WQS |
| 1,2-Dichloroethane | 7,178 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 1,1-Dichloroethylene | 4,568 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 1,2-Dichloropropane | 653 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 1,3-Dichloropropylene | 196 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 1,4-Dioxane | N/A | N/A | No WQS |
| Ethylbenzene | 9,413 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Methyl Bromide | 9,006 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Methyl Chloride | 458,492 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Methylene Chloride | 14,500 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 1,1,2,2-Tetrachloroethane | 145 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Tetrachloroethylene | 7,250 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Toluene | 7,890 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 1,2-trans-Dichloroethylene | 13,842 | µg/L | Discharge Conc ≤ 25% WQBEL |

| | | | |
|---|---|---|---|
| 1,1,1-Trichloroethane | 49,124 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 1,1,2-Trichloroethane | 399 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Trichloroethylene | 435 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Vinyl Chloride | 14.5 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Acenaphthene | 1,359 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Acenaphthylene | N/A | N/A | No WQS |
| Anthracene | 41,526 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Benzidine | 0.073 | µg/L | Discharge Conc < TQL |
| Benzo(a)Anthracene | 0.73 | µg/L | Discharge Conc < TQL |
| Benzo(a)Pyrene | 0.073 | µg/L | Discharge Conc < TQL |
| 3,4-Benzofluoranthene | 0.73 | µg/L | Discharge Conc < TQL |
| Benzo(ghi)Perylene | N/A | N/A | No WQS |
| Benzo(k)Fluoranthene | 7.25 | µg/L | Discharge Conc < TQL |
| Bis(2-Chloroethoxy)Methane | N/A | N/A | No WQS |
| Bis(2-Chloroethyl)Ether | 21.8 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Bis(2-Chloroisopropyl)Ether | 27,684 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Bis(2-Ethylhexyl)Phthalate | 232 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 4-Bromophenyl Phenyl Ether | 4,421 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Butyl Benzyl Phthalate | 13.8 | µg/L | Discharge Conc < TQL |
| 2-Chloronaphthalene | 110,737 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 4-Chlorophenyl Phenyl Ether | N/A | N/A | No WQS |
| Chrysene | 87.0 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Dibenzo(a,h)Anthrancene | 0.073 | µg/L | Discharge Conc < TQL |
| 1,2-Dichlorobenzene | 13,427 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 1,3-Dichlorobenzene | 969 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 1,4-Dichlorobenzene | 11,954 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 3,3-Dichlorobenzidine | 36.3 | µg/L | Discharge Conc < TQL |
| Diethyl Phthalate | 65,499 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Dimethyl Phthalate | 40,937 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Di-n-Butyl Phthalate | 1,801 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 2,4-Dinitrotoluene | 36.3 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 2,6-Dinitrotoluene | 36.3 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Di-n-Octyl Phthalate | N/A | N/A | No WQS |
| 1,2-Diphenylhydrazine | 21.8 | µg/L | Discharge Conc < TQL |
| Fluoranthene | 2,768 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Fluorene | 6,921 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Hexachlorobenzene | 0.058 | µg/L | Discharge Conc < TQL |
| Hexachlorobutadiene | 7.25 | µg/L | Discharge Conc < TQL |
| Hexachlorocyclopentadiene | 81.9 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Hexachloroethane | 72.5 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Indeno(1,2,3-cd)Pyrene | 0.73 | µg/L | Discharge Conc < TQL |
| Isophorone | 4,706 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Naphthalene | 2,292 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Nitrobenzene | 1,384 | µg/L | Discharge Conc ≤ 25% WQBEL |
| n-Nitrosodimethylamine | 0.51 | µg/L | Discharge Conc < TQL |

| | | | |
|---|---|---|---|
| n-Nitrosodi-n-Propylamine | 3.63 | µg/L | Discharge Conc < TQL |
| n-Nitrosodiphenylamine | 2,393 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Phenanthrene | 81.9 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Pyrene | 2,768 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 1,2,4-Trichlorobenzene | 9.69 | µg/L | Discharge Conc < TQL |

**Ardagh Glass**
Port Allegany Boro, McKean County
PA0001872 Discharge pH

Outfall 001

| Date | pH min | pH max | 10^ -pH min | 10^ -pH max | & pH max) | -Log (Ave pH) |
|---|---|---|---|---|---|---|
| Jul-21 | 8.0 | 8.6 | 1E-08 | 2.51E-09 | 6.26E-09 | **8.2** |
| Aug-21 | 8.4 | 8.7 | 3.98E-09 | 2E-09 | 2.99E-09 | **8.5** |
| Sep-21 | 8.5 | 8.8 | 3.16E-09 | 1.58E-09 | 2.37E-09 | **8.6** |
| Jul-22 | 7.4 | 8.7 | 3.98E-08 | 2E-09 | 2.09E-08 | **7.7** |
| Aug-22 | 8.6 | 9.6 | 2.51E-09 | 2.51E-10 | 1.38E-09 | **8.9** |
| Sep-22 | 6.7 | 7.9 | 2E-07 | 1.26E-08 | 1.06E-07 | **7.0** |
| Jul-23 | 6.2 | 7.7 | 6.31E-07 | 2E-08 | 3.25E-07 | **6.5** |
| Aug-23 | 7.4 | 8.9 | 3.98E-08 | 1.26E-09 | 2.05E-08 | **7.7** |
| Sep-23 | 6.9 | 8.9 | 1.26E-07 | 1.26E-09 | 6.36E-08 | **7.2** |
| | | | | | Median: | **8.4** |