pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

**Southwest Regional Office**
**CLEAN WATER PROGRAM**

| | | | |
|---|---|---|---|
| Application Type | **Renewal** | Application No. | **PA0001562** |
| Facility Type | **Industrial** | APS ID | **982963** |
| Major / Minor | **Major** | Authorization ID | **1255407** |

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

## Applicant and Facility Information

| | | | |
|---|---|---|---|
| Applicant Name | **Mon River Industrial Group, LLC** | Facility Name | **Allenport Plant** |
| Applicant Address | PO Box 249 1 Wheeling Pittsburgh Drive | Facility Address | 1 Wheeling Pgh Steel Drive |
| | Allenport, PA 15412-0249 | | Allenport, PA 15412 |
| Applicant Contact | Jerry Honaker | Facility Contact | Jerry Honaker |
| Applicant Phone | (724) 326-8489 | Facility Phone | (724) 326-8489 |
| Client ID | 297998 | Site ID | 245367 |
| SIC Code | 6519 | Municipality | Allenport Borough |
| SIC Description | Lessors of real estate property | County | Washington |
| Date Application Received | December 17, 2018 | EPA Waived? | Yes |
| Date Application Accepted | May 02, 2019 | If No, Reason | |

Purpose of Application: Renewal of an individual industrial waste permit

## Summary of Review

### Permitting History

Mon River Industrial Group (MRIG), LLC has submitted a Notice Of Intent for a minor individual permit for the Allenport Plant facility located in the Borough of Allenport, Washington County on December 17, 2018. Historically owned by Wheeling-Pittsburgh Steel Corporation, the site was a cold-rolled steel mill with a wastewater treatment plant to treat process wastewater from site operations. All manufacturing operations ceased in 2008. The previous permit expired in 2006. The facility has been re-designated from IW Major to IW Minor without ELG during the current permit renewal process.

### Facility Overview

The Allenport plant is situated at 1 Wheeling Pittsburgh Drive, Allenport, PA and is bound to the east by the Monongahela River, to the north and south by neighboring parcels, and to the west by Wheeling Pittsburgh Drive. All manufacturing operations ceased; many of the old buildings and site features still exist and are planned for demolition. The site is presently owned by Mon River Industrial Group (MRIG) and is leased to tenants. The tenants are PVS Steel Services (formerly AMROX), Frac Water Resources, Tidewater Logistics, Matriculated Services, Inc., and Jansens & Dieperink. No additions to the facility are proposed as part of the current renewal process.

The Allenport plant currently has five stormwater outfalls, one internal monitoring point, and two non-process wastewater outfalls. Table 1 displays the details of the outfalls.

| Approve | Deny | Signatures | Date |
|---|---|---|---|
| x | | /s/<br>Mahbuba Iasmin, Ph.D. / Environmental Engineering Specialist | 10/4/2019 |
| x | | /s/<br>Michael E. Fifth / Environmental Engineer Manager | 10/7/19 |

**Summary of Review**

**Table 1. Outfall Details**

| Outfall/Internal Monitoring Point (IMP) | Types of Discharge | Potential Pollutant(s) and Sources | Control Measures |
|---|---|---|---|
| 001 | Stormwater | Stormwater runoff from the AMROX plant and off-site drainage | Route inspection and site cleanup activities |
| 002 | Stormwater and groundwater | Stormwater runoff from IMP 202 | Route inspection and site cleanup activities |
| 202 | | Stormwater runoff and possibly groundwater from the hotmill basements and the SS-002 annulus which collects stormwater from the site | Wastewater treatment plant |
| 003 | Stormwater | Site and roof runoff from former steel mill facilities | Route inspection and site cleanup activities |
| 004 | Stormwater | Site and roof runoff from former steel mill facilities | Route inspection and site cleanup activities |
| 005 | Stormwater | Site and roof runoff from former steel mill facilities | Route inspection and site cleanup activities |
| 007 | River intake surplus | | |
| 010 | River intake pump house screen backwash | | |

**River Water Intake Structures**

The Allenport plant operates several intake structures that are used to withdraw water from the Monongahela River. The water withdrawn is currently used for the on-site dust control and off-site purposes. The off-site uses are for drilling (fracking) purposes by MRIG customers and separate from MRIG. Frac Water Resources (one of the tenants) withdraws river water from one of the small river intact cells for sale to the oil and gas industry. Operations utilize an 8-inch pump rated at 1380 GPM with 2-MGD daily withdrawal limit. MRIG mentions that in the event that any future onsite uses of withdrawn water were to be cooling water related, they would use less than 25% of withdrawn waters for cooling purposes. Therefore, 316(b) requirements per 40 CFR §125.91 are not applicable to Allenport Plant for the current renewal.

**Public Notifications and Zoning Approval**

MRIG submitted Act 14 notifications to the Allenport Borough Council, Allenport, PA and Washington County Commissioners, Washington, PA on November 26, 2018. The facility published the newspaper notification on Observer-Reporter for four consecutive weeks: 12/19/2018, 12/26/2018, 01/02/2019, and 01/09/2019.

**Conclusion**

There is no open violation by Client ID. 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*,

| **Summary of Review** |
| --- |
| 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, 003, 004, 005 | Design Flow (MGD) | 0 (varied) |
| | 40º 05' 42" | | -79º 50' 31" |
| | 40º 05' 25" | | -79º 50' 23" |
| | 40º 05' 21" | | -79º 50' 24" |
| Latitude | 40º 05' 19" | Longitude | -79º 50' 25" |
| Quad Name | Fayette City | Quad Code | 1807 |
| Wastewater Description: | Stormwater | | |

| | | | |
|---|---|---|---|
| Receiving Waters | Monongahela River (WWF) | Stream Code | 37185 |
| NHD Com ID | 99410298 | RMI | 45.52 |
| Drainage Area | | Yield (cfs/mi$^2$) | |
| $Q_{7-10}$ Flow (cfs) | | $Q_{7-10}$ Basis | |
| Elevation (ft) | | Slope (ft/ft) | |
| Watershed No. | 19-C | Chapter 93 Class. | WWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Impaired | | |
| Cause(s) of Impairment | POLYCHLORINATED BIPHENYLS (PCBs) and Chlordane | | |
| Source(s) of Impairment | SOURCE UNKNOWN | | |
| TMDL Status | Final | Name | Monongahela River TMDL |

| Background/Ambient Data | | Data Source |
|---|---|---|
| pH (SU) | 7 | 25 § 93.7 |
| Temperature (°F) | | |
| Hardness (mg/L) | 100 | 25 § 93.8c |
| Other: | | |

| | | | |
|---|---|---|---|
| Nearest Downstream Public Water Supply Intake | Municipal Authority of Washington Township | | |
| PWS Waters | Monongahela River | Flow at Intake (cfs) | 540 |
| PWS RMI | 46.0 | Distance from Outfall (mi) | 0.48 miles |

Changes Since Last Permit Issuance: Steel production operations have been ceased.

Other Comments: Stormwater only discharge.

**Development of Effluent Limitations**

| | | | |
|---|---|---|---|
| **Outfall No.** | 001, 003, 004, 005 | **Design Flow (MGD)** | 0 (varied) |
| | 40º 05' 42" | | -79º 50' 31" |
| | 40º 05' 25" | | -79º 50' 23" |
| | 40º 05' 21" | | -79º 50' 24" |
| **Latitude** | 40º 05' 19" | **Longitude** | -79º 50' 25" |
| **Wastewater Description:** | Stormwater | | |

**Stormwater Drainage Overview**

The stormwater discharge through Outfalls 001, 003, 004, and 005 is primarily site and roof drainage from the existing non-operating steel mill site, currently leased to tenants.

**Technology-Based Effluent Limitations (TBELs)**

Outfall 001 effluent is comprised of stormwater runoff from the AMROX plant and offsite drainage. There are no Federal Effluent Limitation Guidelines (ELGs) or state regulations requiring effluent limitations for this type of discharge. In lieu of a federal ELG, Section III of DEP's IW Effluent Limit SOP recommends that permit writers consider the following when evaluating the need for effluent limits and monitoring requirements for industrial stormwater discharges:

A. Effluent limits and monitoring requirements for industrial stormwater discharges may be important for ensuring that Best Management Practices (BMPs) are adequately implemented.

B. Application managers will consider, where appropriate, applying treatment standards contained in Chapter 95.

C. The applicable appendix of the PAG-03 General Permit should be considered the minimum standards for limits and monitoring requirements for individual industrial stormwater permits. The application manager may include other limits and monitoring requirements as justified in the fact sheet.

D. In general, if actual stormwater concentrations exceed 100 times the most stringent Chapter 93 criterion (or a lesser amount for large industrial areas that drain to small streams) or exceed 100 mg/L for pollutants without criteria, the application manager should consider applying effluent limits for the applicable parameters and/or the implementation of BMPs with compliance schedules as necessary to achieve the limits or otherwise reduce stormwater concentrations.

Consistent with the recommendations in Section III.C of the IW Effluent Limit SOP cited above, minimum standards described in the PAG-03 General Permit for “Discharges of Stormwater Associated with Industrial Activity” will be applied to MRIG’s stormwater discharges. Based on MRIG’s SIC code (6519 – Lessors of Real Estate Property), the facility would be classified under Appendix J – Additional Facilities. The monitoring requirements of Appendix J of the PAG-03 are displayed in Table 2.

**Table 2. PAG-03 – Appendix J Minimum Monitoring Requirements**

| Discharge Parameter | Units | Sample Type | Benchmark Values |
|---|---|---|---|
| Total Suspended Solids | mg/L | Grab | 100 |
| Oil and Grease | mg/L | Grab | 30 |

To the extent that effluent limits would be necessary to ensure that BMPs are adequately implemented, DEP's *Permit Writer's Manual* recommends that effluent limits be developed for industrial stormwater discharges based on a determination of Best Available Technology (BAT) using Best Professional Judgment (BPJ). Although BPJ of BAT typically involves the evaluation of end-of-pipe wastewater treatment technologies, DEP considers the use of BMPs to be BAT for MRIG’s stormwater in Outfall 001 for the current permit term.

Effluent standards for pH from 25 Pa. §95.2(1) and dissolved iron from 25 Pa. §95.2(4) will also be implemented.

The facility has a public water supply intake at less than 0.5 miles from the outfall(s). Therefore, monitoring of potable water supply (PWS) parameters (i.e., Total Dissolved Solids, Sulfate, Chloride, Bromide, and Fluoride) will also be applied at the outfalls mentioned.

## Water Quality-Based Effluent Limitations (WQBELs)

MRIG submitted stormwater sample analytical data for the outfalls mentioned. The analytical data does not suggest sampling of additional parameters in addition to the PAG-03 General Permit parameters mentioned in Table 2.

Upon review of the discharge monitoring reports (DMRs) for the past five years (2015-2019), the total aluminum and total iron contents in Outfall 005 were found to be somewhat high. The high total aluminum content ranged from 1.28-1.73 mg/L average monthly. The high total iron content varied from 1.29-8.52 mg/L average monthly. Dissolved iron limit will account for the total iron content. The previous permit had monitor and report requirements for fecal coliform, aluminum, iron, and zinc. Per anti-backsliding requirements, monitor and report requirements for fecal coliform, aluminum, and zinc will be carried over in the current permit.

### *TMDL Requirements*

Monongahela River has final TMDL for PCBs and Chlordane from Point Marion L/D to Gray's Landing L/D. MRIG and its outfalls are located between Maxwell L&D and L&D 4 at Charleroi, downstream of the TMDL reach. No specific TMDL is listed for the current reach of concern in Monongahela River.

## Effluent Limitations and Monitoring Requirements for Outfalls 001, 003, 004, and 005

Effluent limits imposed at Outfalls 001, 003, 004, and 005 are the most stringent of TBELs, WQBELs, regulatory effluent standards and monitoring requirements as described in the sections above. The applicable requirements are summarized in Table 3. Since discharges from Outfalls 001, 003, 004, and 005 are precipitation-induced and non-continuous, grab sampling will be required for all parameters except flow, which should be estimated.

**Table 3. Monitoring Requirements for Outfalls 001, 003, and 004**

| Parameter | Minimum | Average Monthly | Daily Maximum | Instantaneous Maximum | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|
| Flow (MGD) | - | - | Report | - | 1/month | Estimated |
| pH | 6.0 | - | - | 9.0 | 1/month | Grab |
| Total Suspended Solids (mg/L) | - | - | Report | - | 1/month | Grab |
| Oil and Grease (mg/L) | - | - | Report | - | 1/month | Grab |
| Dissolved Iron (mg/L) | - | - | Report | 7.0 | 1/month | Grab |
| Total Dissolved Solids (mg/L) | - | - | Report | - | 1/month | Grab |
| Sulfate (mg/L) | - | - | Report | - | 1/month | Grab |
| Chloride (mg/L) | - | - | Report | - | 1/month | Grab |
| Bromide (mg/L) | - | - | Report | - | 1/month | Grab |
| Fluoride (mg/L) | - | - | Report | - | 1/month | Grab |

**Effluent Limitations and Monitoring Requirements for Outfall 005**

The applicable requirements for Outfall 005 are summarized in Table 4.

**Table 4. Monitoring Requirements for Outfall 005**

| Parameter | Minimum | Average Monthly | Daily Maximum | Instantaneous Maximum | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|
| Flow (MGD) | - | - | Report | - | 1/month | Estimated |
| pH | 6.0 | - | - | 9.0 | 1/month | Grab |
| Total Suspended Solids (mg/L) | - | - | Report | - | 1/month | Grab |
| Oil and Grease (mg/L) | - | - | Report | - | 1/month | Grab |
| Dissolved Iron (mg/L) | - | - | Report | 7.0 | 1/month | Grab |
| Total Dissolved Solids (mg/L) | - | - | Report | - | 1/month | Grab |
| Sulfate (mg/L) | - | - | Report | - | 1/month | Grab |
| Chloride (mg/L) | - | - | Report | - | 1/month | Grab |
| Bromide (mg/L) | - | - | Report | - | 1/month | Grab |
| Fluoride (mg/L) | - | - | Report | - | 1/month | Grab |
| Fecal coliform (#/100ml) | - | - | Report | - | 1/quarter | Grab |
| Aluminum (mg/L) | - | - | Report | - | 1/quarter | Grab |
| Zinc (mg/L) | - | - | Report | - | 1/quarter | Grab |

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

| | | | |
|---|---|---|---|
| Outfall No. | 002 | Design Flow (MGD) | 0 (varied) |
| Latitude | 40º 5' 27" | Longitude | -79º 50' 23" |
| Quad Name | Fayette City | Quad Code | 1807 |
| Wastewater Description: | Stormwater and groundwater | | |
| Receiving Waters | Monongahela River (WWF) | Stream Code | 37185 |
| NHD Com ID | 99410490 | RMI | 47.0 |
| Drainage Area | | Yield (cfs/mi$^2$) | |
| $Q_{7-10}$ Flow (cfs) | | $Q_{7-10}$ Basis | |
| Elevation (ft) | | Slope (ft/ft) | |
| Watershed No. | 19-C | Chapter 93 Class. | WWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Impaired | | |
| Cause(s) of Impairment | POLYCHLORINATED BIPHENYLS (PCBs) and Chlordane | | |
| Source(s) of Impairment | SOURCE UNKNOWN | | |
| TMDL Status | Final | Name | Monongahela River TMDL |

| Background/Ambient Data | | Data Source |
|---|---|---|
| pH (SU) | 7 | 25 § 93.7 |
| Temperature (°F) | | |
| Hardness (mg/L) | 100 | 25 § 93.8c |
| Other: | | |

| | | | |
|---|---|---|---|
| Nearest Downstream Public Water Supply Intake | Municipal Authority of Washington Township | | |
| PWS Waters | Monongahela River | Flow at Intake (cfs) | 540 |
| PWS RMI | 46.0 | Distance from Outfall (mi) | 1.0 |

Changes Since Last Permit Issuance: No pickling operations.

Other Comments: None.

**Development of Effluent Limitations**

| | | | |
|---|---|---|---|
| **Outfall No.** | 002 | **Design Flow (MGD)** | 0 (varied) |
| **Latitude** | 40º 5' 27" | **Longitude** | -79º 50' 23" |
| **Wastewater Description:** | Stormwater and groundwater | | |

**Stormwater Drainage Overview**

The stormwater discharge through Outfall 002 is a combination of site and roof drainage from the existing non-operating steel mill site and treated stormwater from internal monitoring point (IMP) 202. The details of the limits/monitoring requirements are explained in the following section. The IMP 202 has been evaluated and limits/monitoring requirements have been imposed separately. The stormwater outfall limits/monitoring requirements as evaluated in the previous section (for Outfalls 001, 003, 004, and 005) will be applied at Outfall 002, as presented in Table 3.

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

| | | | |
|---|---|---|---|
| Outfall No. | IMP 202 | Design Flow (MGD) | 0.014 |
| Latitude | 40º 5' 42" | Longitude | -79º 50' 31" |
| Quad Name | Fayette City | Quad Code | 1807 |
| Wastewater Description: | Treated stormwater and groundwater | | |
| Receiving Waters | Monongahela River (WWF) | Stream Code | 37185 |
| NHD Com ID | 99410298 | RMI | 47.0 |
| Drainage Area | | Yield (cfs/mi$^2$) | |
| $Q_{7-10}$ Flow (cfs) | | $Q_{7-10}$ Basis | |
| Elevation (ft) | | Slope (ft/ft) | |
| Watershed No. | 19-C | Chapter 93 Class. | WWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Impaired | | |
| Cause(s) of Impairment | POLYCHLORINATED BIPHENYLS (PCBs) and Chlordane | | |
| Source(s) of Impairment | SOURCE UNKNOWN | | |
| TMDL Status | Final | Name | Monongahela River TMDL |

| Background/Ambient Data | | Data Source |
|---|---|---|
| pH (SU) | 7 | 25 § 93.7 |
| Temperature (°F) | | |
| Hardness (mg/L) | 100 | 25 § 93.8c |
| Other: | | |

| | | | |
|---|---|---|---|
| Nearest Downstream Public Water Supply Intake | Municipal Authority of Washington Township | | |
| PWS Waters | Monongahela River | Flow at Intake (cfs) | 540 |
| PWS RMI | 46.0 | Distance from Outfall (mi) | 1.0 |

Changes Since Last Permit Issuance: No pickling operations. Treated stormwater only.

Other Comments: None.

**Development of Effluent Limitations**

| | | | |
|---|---|---|---|
| **Outfall No.** | IMP 202 | **Design Flow (MGD)** | 0.014 |
| **Latitude** | 40º 5' 42" | **Longitude** | -79º 50' 31" |
| **Wastewater Description:** | Treated Stormwater and groundwater | | |

**Internal Monitoring Point (IMP) Overview**

Stormwater and possibly groundwater are collected from the SS-002 annulus and the hot mill basements and pumped into the Oil/Water Separator. Water is then pumped at 100-110 gpm to the mixing box. Water then flows into Reactor 1 and then to either Reactor 2 or the Splitter Box. The Splitter Box directs the flow into either the North Clariflocculator or

the South Clariflocculator. Afterwards, the water is direct-line injected with caustic soda, allowed to mix, and then coagulant was added and allowed to mix. Water then enters a Multimedia Filter and pumped at 100 gpm into a Buffer Tank. After the Buffer Tank, the effluent reaches Outfall 202. The Multimedia Filter is backwashed into a Dewatering Tank, the effluent of which returns to the South Clarifier. The solid or liquid residue resulting from treatment is sent to landfill. The discharge from this IMP is batch discharge at 0.014 MGD rate for 8 hours.

**Technology-Based Effluent Limitations (TBELs)**

The technology-based effluent limitations for IMP 202 will be followed as presented in the TBELs section for Outfall 001. The PAG-03 requirements will be applied at Outfall 002.

**Water Quality-Based Effluent Limitations (WQBELs)**

Table 5 presents the sample analytical results for IMP 202. The parameter concentrations do not exceed the EPA's benchmarks for 2015 Multi Sector General Permit (MSGP).

**Table 5. Analytical Results for Treated Stormwater through IMP 202**

| Parameter | Concentration |
|---|---|
| pH | 7.8 |
| Oil and Grease (mg/L) | 4.8 |
| Biochemical Oxygen Demand (5-day) (mg/L) | 3.5 |
| Chemical Oxygen Demand (mg/L) | 24.6 |
| Total Suspended Solids (mg/L) | 4.0 |
| Total Nitrogen (mg/L) | 1.3 |
| Total Phosphorus (mg/L) | 0.03 |
| Lead (µg/L) | 5.0 |
| Zinc (µg/L) | 4.0 |
| Naphthalene (µg/L) | 1.0 |
| Tetrachloroethylene (µg/L) | 1.0 |

Monitoring for the potable water supply (PWS) parameters (i.e., Total Dissolved Solids, Sulfate, Chloride, Bromide, and Fluoride) will also be applied since there is a PWS intake within 1 mile downstream of the IMP/outfall.

Previously the permit held limits for IMP 202 for flow, suspended solids, oil and grease, lead, zinc, naphthalene, tetrachloroethylene due to tandem mill pickling operations. After reviewing the analytical results, the facility is not likely to discharge the pickling operation parameters (i.e., lead, zinc, naphthalene, tetrachloroethylene) at a level that would trigger permit limits. A toxic screening spreadsheet and PENTOXSD analysis were run as displayed in Appendix A. Therefore, Table 3 monitoring requirements (for stormwater) in addition to monitoring only for the historic pickling operation (i.e., lead, zinc, naphthalene, tetrachloroethylene) will be applied at IMP 202. The applicable requirements are summarized in Table 6.

**Table 6. Monitoring Requirements for IMP 202**

| Parameter | Minimum | Average Monthly | Daily Maximum | Instantaneous Maximum | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|
| Flow (MGD) | - | - | Report | - | 1/month | Estimated |
| pH | 6.0 | - | - | 9.0 | 1/month | Grab |
| Total Suspended Solids (mg/L) | - | - | Report | - | 1/month | Grab |
| Oil and Grease (mg/L) | - | - | Report | - | 1/month | Grab |
| Dissolved Iron (mg/L) | - | - | Report | 7.0 | 1/month | Grab |
| Total Dissolved Solids (mg/L) | - | - | Report | - | 1/month | Grab |
| Sulfate (mg/L) | - | - | Report | - | 1/month | Grab |

| | | | | | | |
|---|---|---|---|---|---|---|
| Chloride (mg/L) | - | - | Report | - | 1/month | Grab |
| Bromide (mg/L) | - | - | Report | - | 1/month | Grab |
| Fluoride (mg/L) | - | - | Report | - | 1/month | Grab |
| Lead (µg/L) | - | - | Report | - | 1/month | Grab |
| Zinc (µg/L) | - | - | Report | - | 1/month | Grab |
| Naphthalene (µg/L) | - | - | Report | - | 1/month | Grab |
| Tetrachloroethylene (µg/L) | - | - | Report | - | 1/month | Grab |

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

| | | | |
|---|---|---|---|
| Outfall No. | 007 | Design Flow (MGD) | 0 |
| Latitude | 40º 5' 15" | Longitude | -79º 50' 27" |
| Quad Name | Fayette City | Quad Code | 1807 |
| Wastewater Description: | River Intake Surplus Water (river water) | | |
| Receiving Waters | Monongahela River (WWF) | Stream Code | 37185 |
| NHD Com ID | 99410490 | RMI | 46.63 |
| Drainage Area | | Yield (cfs/mi$^2$) | |
| $Q_{7-10}$ Flow (cfs) | | $Q_{7-10}$ Basis | |
| Elevation (ft) | | Slope (ft/ft) | |
| Watershed No. | 19-C | Chapter 93 Class. | WWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Impaired | | |
| Cause(s) of Impairment | POLYCHLORINATED BIPHENYLS (PCBs) and Chlordane | | |
| Source(s) of Impairment | SOURCE UNKNOWN | | |
| TMDL Status | Final | Name | Monongahela River TMDL |

| Background/Ambient Data | | Data Source |
|---|---|---|
| pH (SU) | 7 | 25 § 93.7 |
| Temperature (°F) | | |
| Hardness (mg/L) | 100 | 25 § 93.8c |
| Other: | | |

| | | | |
|---|---|---|---|
| Nearest Downstream Public Water Supply Intake | Municipal Authority of Washington Township | | |
| PWS Waters | Monongahela River | Flow at Intake (cfs) | 540 |
| PWS RMI | 46.0 | Distance from Outfall (mi) | 0.63 |

Changes Since Last Permit Issuance: None.

Other Comments: None.

**Development of Effluent Limitations**

| | | | |
|---|---|---|---|
| **Outfall No.** | 007 | **Design Flow (MGD)** | 0 (varied) |
| **Latitude** | 40º 5' 15" | **Longitude** | -79º 50' 27" |
| **Wastewater Description:** | Pumphouse river water intake surplus (river water) | | |

**Overview**

MRIG leases the facility to tenants and sells the river water for non-cooling purposes. Therefore, only daily flow average monthly monitoring will be applied at Outfall 007 as imposed in previous permit. The measurement frequency (i.e., 2/month) applied will also be carried over from previous permit. The applicable requirements are summarized in Table 7.

**Table 7. Monitoring Requirements for Outfall 007**

| Parameter | Minimum | Average Monthly | Daily Maximum | Instantaneous Maximum | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|
| Flow (MGD) | - | Report | - | - | 2/month | Estimated |

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

| | | | |
|---|---|---|---|
| Outfall No. | 010 | Design Flow (MGD) | 0 |
| Latitude | 40º 5' 15" | Longitude | -79º 50' 27" |
| Quad Name | Fayette City | Quad Code | 1807 |
| Wastewater Description: | River Intake Pump House Screen Backwash (river water) | | |
| Receiving Waters | Monongahela River (WWF) | Stream Code | 37185 |
| NHD Com ID | 99410490 | RMI | 46.63 |
| Drainage Area | | Yield (cfs/mi$^2$) | |
| $Q_{7-10}$ Flow (cfs) | | $Q_{7-10}$ Basis | |
| Elevation (ft) | | Slope (ft/ft) | |
| Watershed No. | 19-C | Chapter 93 Class. | WWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Impaired | | |
| Cause(s) of Impairment | POLYCHLORINATED BIPHENYLS (PCBs) and Chlordane | | |
| Source(s) of Impairment | SOURCE UNKNOWN | | |
| TMDL Status | Final | Name | Monongahela River TMDL |

| Background/Ambient Data | | Data Source |
|---|---|---|
| pH (SU) | 7 | 25 § 93.7 |
| Temperature (°F) | | |
| Hardness (mg/L) | 100 | 25 § 93.8c |
| Other: | | |

| | | | |
|---|---|---|---|
| Nearest Downstream Public Water Supply Intake | Municipal Authority of Washington Township | | |
| PWS Waters | Monongahela River | Flow at Intake (cfs) | 540 |
| PWS RMI | 46.0 | Distance from Outfall (mi) | 0.63 |

Changes Since Last Permit Issuance: None.

Other Comments: None.

**Development of Effluent Limitations**

| | | | |
|---|---|---|---|
| **Outfall No.** | 010 | **Design Flow (MGD)** | 0 (varied) |
| **Latitude** | 40º 5' 15" | **Longitude** | -79º 50' 27" |
| **Wastewater Description:** | River intake pumphouse screen backwash (river water) | | |

**Overview**

MRIG discharges the screen backwash river water through Outfall 010. No limits will be assigned for this outfall. A condition will be continued from the previous permit that states, “All materials (solids and other debris) collected on the water intake screens shall be collected and disposed of in a manner to prevent said material from reentering the surface waters”.

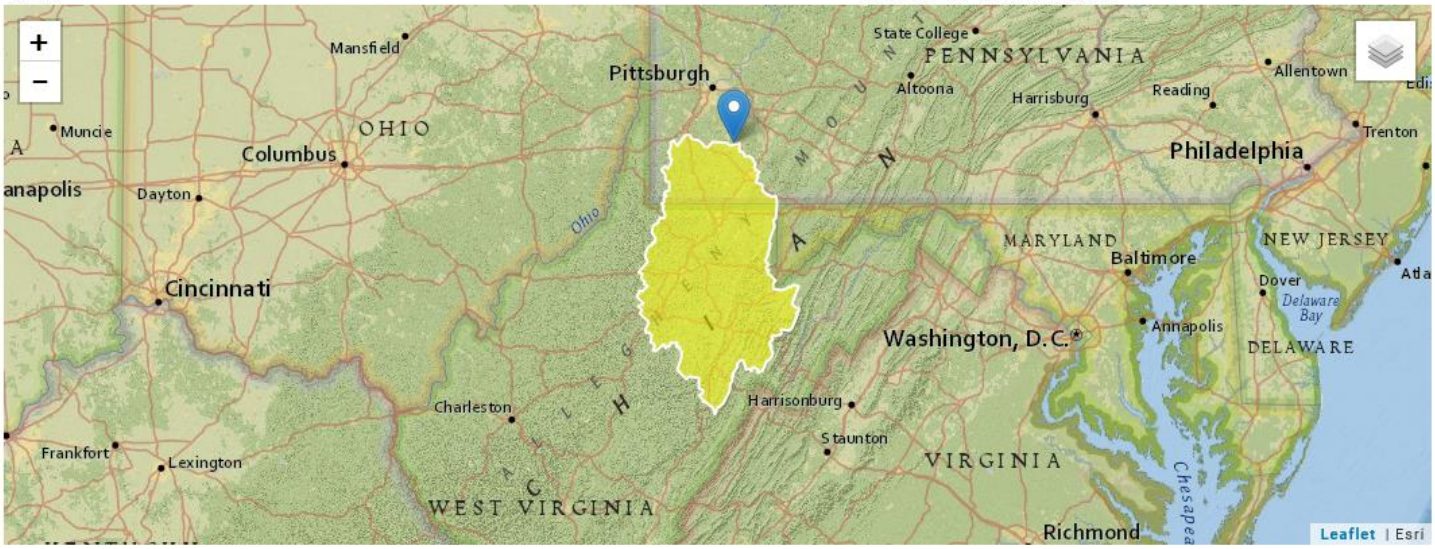
| Compliance History | |
|---|---|
| | |
| **Summary of DMRs:** | Upon review of the DMRs for the past five years (2015-2019), total aluminum and total iron contents in Outfall 005 were found to be somewhat high. The high total aluminum content ranged from 1.28-1.73 mg/L average monthly. The high total iron content varied from 1.29-8.52 mg/L average monthly. |
| **Summary of Inspections:** | Last DEP inspection on May 15, 2018. No violations were reported. |

Other Comments: **None.**

# Appendix A

## StreamStats Report

| | |
|---|---|
| **Region ID:** | PA |
| **Workspace ID:** | PA20191002193904343000 |
| **Clicked Point (Latitude, Longitude):** | 40.09715, -79.84164 |
| **Time:** | 2019-10-02 15:39:25 -0400 |




Basin Characteristics

| Parameter Code | Parameter Description | Value | Unit |
|---|---|---|---|
| DRNAREA | Area that drains to a point on a stream | 5180 | square miles |
| ELEV | Mean Basin Elevation | 1846.8 | feet |

Low-Flow Statistics Parameters[100 Percent (5180 square miles) Low Flow Region 4]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 5180 | square miles | 2.26 | 1400 |
| ELEV | Mean Basin Elevation | 1846.8 | feet | 1050 | 2580 |

Low-Flow Statistics Disclaimers[100 Percent (5180 square miles) Low Flow Region 4]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report[100 Percent (5180 square miles) Low Flow Region 4]

| Statistic | Value | Unit |
|---|---|---|
| 7 Day 2 Year Low Flow | 686 | ft^3/s |
| 30 Day 2 Year Low Flow | 911 | ft^3/s |
| 7 Day 10 Year Low Flow | 399 | ft^3/s |
| 30 Day 10 Year Low Flow | 467 | ft^3/s |
| 90 Day 10 Year Low Flow | 695 | ft^3/s |

*Low-Flow Statistics Citations*

**Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p.**

## PENTOXSD

### Modeling Input Data

| Stream Code | RMI | Elevation (ft) | Drainage Area (sq mi) | Slope | PWS With (mgd) | Apply FC |
|---|---|---|---|---|---|---|
| 37185 | 46.75 | 750.00 | 5180.00 | 0.00010 | 1.50 | ☑ |

**Stream Data**

| | LFY | Trib Flow | Stream Flow | WD Ratio | Rch Width | Rch Depth | Rch Velocity | Rch Trav Time | Tributary Hard | Tributary pH | Stream Hard | Stream pH | Analysis Hard | Analysis pH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (cfsm) | (cfs) | (cfs) | | (ft) | (ft) | (fps) | (days) | (mg/L) | | (mg/L) | | (mg/L) | |
| Q7-10 | 0.1 | 0 | 540 | 0 | 0 | 0 | 0 | 0 | 100 | 7 | 100 | 7 | 0 | 0 |
| Qh | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 7 | 0 | 0 | 0 | 0 |

**Discharge Data**

| Name | Permit Number | Existing Disc Flow (mgd) | Permitted Disc Flow (mgd) | Design Disc Flow (mgd) | Reserve Factor | AFC PMF | CFC PMF | THH PMF | CRL PMF | Disc Hard (mg/L) | Disc pH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mon River IG | PA0001562 | 0 | 0.014 | 0 | 0 | 0.2 | 0 | 0 | 0 | 100 | 7 |

**Parameter Data**

| Parameter Name | Disc Conc (µg/L) | Trib Conc (µg/L) | Disc Daily CV | Disc Hourly CV | Steam Conc (µg/L) | Stream CV | Fate Coef | FOS | Crit Mod | Max Disc Conc (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| LEAD | 5 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| TETRACHLOROETHYLENE | 1 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |

## PENTOXSD Analysis Results

### Hydrodynamics

| SWP Basin | Stream Code: | Stream Name: |
|---|---|---|
| 19A | 37185 | MONONGAHELA RIVER |

| RMI | Stream Flow (cfs) | PWS With (cfs) | Net Stream Flow (cfs) | Disc Analysis Flow (cfs) | Reach Slope | Depth (ft) | Width (ft) | WD Ratio | Velocity (fps) | Reach Trav Time (days) | CMT (min) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Q7-10 Hydrodynamics** | | | | | | | | | | | |
| 46.750 | 540 | 2.3205 | 537.68 | 0.02165 | 0.0001 | 1.2271 | 483.06 | 393.66 | 0.9071 | 0.0337 | 1000+ |
| 46.250 | 540 | 2.3205 | 535.36 | NA | 0 | 0 | 0 | 0 | 0 | 0 | NA |
| **Qh Hydrodynamics** | | | | | | | | | | | |
| 46.750 | 1815.9 | 2.3205 | 1813.6 | 0.02165 | 0.0001 | 2.0951 | 483.06 | 230.57 | 1.7920 | 0.0171 | 1000+ |
| 46.250 | 1815.9 | 2.3205 | 1811.3 | NA | 0 | 0 | 0 | 0 | 0 | 0 | NA |

## PENTOXSD Analysis Results

### Wasteload Allocations

| RMI | Name | Permit Number |
|---|---|---|
| **46.75** | **Mon River IG** | **PA0001562** |

**AFC**

**Q7-10:** **CCT (min)** 15 **PMF** 0.2 **Analysis pH** 7 **Analysis Hardness** 100

| Parameter | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) |
|---|---|---|---|---|---|---|---|
| LEAD | 0 | 0 | 0 | 0 | 64.581 | 81.645 | 405464.3 |
| | Dissolved WQC. Chemical translator of 0.791 applied. | | | | | | |
| TETRACHLOROETHYLENE | 0 | 0 | 0 | 0 | 700 | 700 | 3470000 |

**CFC**

**Q7-10:** **CCT (min)** 720 **PMF** 0.174 **Analysis pH** 7 **Analysis Hardness** 100

| Parameter | Stream Conc. (µg/L) | Stream CV | Trib Conc. (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) |
|---|---|---|---|---|---|---|---|
| LEAD | 0 | 0 | 0 | 0 | 2.517 | 3.182 | 13820.63 |
| | Dissolved WQC. Chemical translator of 0.791 applied. | | | | | | |
| TETRACHLOROETHYLENE | 0 | 0 | 0 | 0 | 140 | 140 | 608151 |

**THH**

**Q7-10:** **CCT (min)** 720 **PMF** NA **Analysis pH** NA **Analysis Hardness** NA

| Parameter | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) |
|---|---|---|---|---|---|---|---|
| LEAD | 0 | 0 | 0 | 0 | NA | NA | NA |
| TETRACHLOROETHYLENE | 0 | 0 | 0 | 0 | NA | NA | NA |

**CRL**

**Qh:** **CCT (min)** 720 **PMF** 0.261

| Parameter | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) |
|---|---|---|---|---|---|---|---|
| LEAD | 0 | 0 | 0 | 0 | NA | NA | NA |
| TETRACHLOROETHYLENE | 0 | 0 | 0 | 0 | 0.69 | 0.69 | 15097.51 |

## PENTOXSD Analysis Results

### Recommended Effluent Limitations

| SWP Basin | Stream Code: | Stream Name: |
|---|---|---|
| 19A | 37185 | MONONGAHELA RIVER |

| RMI | Name | Permit Number | Disc Flow (mgd) |
|---|---|---|---|
| 46.75 | Mon River IG | PA0001562 | 0.0140 |

| Parameter | Effluent Limit (µg/L) | Governing Criterion | Max. Daily Limit (µg/L) | Most Stringent WQBEL (µg/L) | Most Stringent WQBEL Criterion |
|---|---|---|---|---|---|
| LEAD | 5 | INPUT | 7.801 | 13820.63 | CFC |
| TETRACHLOROETHYLENE | 1 | INPUT | 1.56 | 15097.51 | CRL |

### TOXICS SCREENING ANALYSIS
### WATER QUALITY POLLUTANTS OF CONCERN
### VERSION 2.7

CLEAR FORM

Facility: **Allenport Plant** NPDES Permit No.: **PA0001562** Outfall: **202**
Analysis Hardness (mg/L): **100** Discharge Flow (MGD): **0.014** Analysis pH (SU): **7**
Stream Flow, $Q_{7-10}$ (cfs): **540**

| | Parameter | Maximum Concentration in Application or DMRs (µg/L) | | Most Stringent Criterion (µg/L) | Candidate for PENTOXSD Modeling? | Most Stringent WQBEL (µg/L) | Screening Recommendation |
|---|---|---|---|---|---|---|---|
| Group 1 | Total Dissolved Solids | | | 500000 | | | |
| | Chloride | | | 250000 | | | |
| | Bromide | | | N/A | | | |
| | Sulfate | | | 250000 | | | |
| | Fluoride | | | 2000 | | | |
| Group 2 | Total Aluminum | | | 750 | | | |
| | Total Antimony | | | 5.6 | | | |
| | Total Arsenic | | | 10 | | | |
| | Total Barium | | | 2400 | | | |
| | Total Beryllium | | | N/A | | | |
| | Total Boron | | | 1600 | | | |
| | Total Cadmium | | | 0.271 | | | |
| | Total Chromium | | | N/A | | | |
| | Hexavalent Chromium | | | 10.4 | | | |
| | Total Cobalt | | | 19 | | | |
| | Total Copper | | | 9.3 | | | |
| | Total Cyanide | | | N/A | | | |
| | Total Iron | | | 1500 | | | |
| | Dissolved Iron | | | 300 | | | |
| | Total Lead | | 5 | 3.2 | Yes | 13820.63 | No Limits/Monitoring |
| | Total Manganese | | | 1000 | | | |
| | Total Mercury | | | 0.05 | | | |
| | Total Molybdenum | | | N/A | | | |
| | Total Nickel | | | 52.2 | | | |
| | Total Phenols (Phenolics) | | | 5 | | | |
| | Total Selenium | | | 5.0 | | | |
| | Total Silver | | | 3.8 | | | |
| | Total Thallium | | | 0.24 | | | |
| | Total Zinc | | 4 | 119.8 | No | | |
| | Acrolein | < | | 3 | | | |
| | Acrylamide | < | | 0.07 | | | |
| | Acrylonitrile | < | | 0.051 | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Group 3 | Bromoform | < | | 4.3 | | | |
| | Carbon Tetrachloride | < | | 0.23 | | | |
| | Chlorobenzene | < | | 130 | | | |
| | Chlorodibromomethane | < | | 0.4 | | | |
| | Chloroethane | < | | N/A | | | |
| | 2-Chloroethyl Vinyl Ether | < | | 3500 | | | |
| | Chloroform | < | | 5.7 | | | |
| | Dichlorobromomethane | < | | 0.55 | | | |
| | 1,1-Dichloroethane | < | | N/A | | | |
| | 1,2-Dichloroethane | < | | 0.38 | | | |
| | 1,1-Dichloroethylene | < | | 33 | | | |
| | 1,2-Dichloropropane | < | | 2200 | | | |
| | 1,3-Dichloropropylene | < | | 0.34 | | | |
| | Ethylbenzene | < | | 530 | | | |
| | Methyl Bromide | < | | 47 | | | |
| | Methyl Chloride | < | | 5500 | | | |
| | Methylene Chloride | < | | 4.6 | | | |
| | 1,1,2,2-Tetrachloroethane | < | | 0.17 | | | |
| | Tetrachloroethylene | < | 1 | 0.69 | Yes | 15097.51 | No Limits/Monitoring |
| | Toluene | < | | 330 | | | |
| | 1,2-trans-Dichloroethylene | < | | 140 | | | |
| | 1,1,1-Trichloroethane | < | | 610 | | | |
| | 1,1,2-Trichloroethane | < | | 0.59 | | | |
| | Trichloroethylene | < | | 2.5 | | | |
| | Vinyl Chloride | < | | 0.025 | | | |
| Group 4 | 2-Chlorophenol | < | | 81 | | | |
| | 2,4-Dichlorophenol | < | | 77 | | | |
| | 2,4-Dimethylphenol | < | | 130 | | | |
| | 4,6-Dinitro-o-Cresol | < | | 13 | | | |
| | 2,4-Dinitrophenol | < | | 69 | | | |
| | 2-Nitrophenol | < | | 1600 | | | |
| | 4-Nitrophenol | < | | 470 | | | |
| | p-Chloro-m-Cresol | < | | 30 | | | |
| | Pentachlorophenol | < | | 0.27 | | | |
| | Phenol | < | | 10400 | | | |
| | 2,4,6-Trichlorophenol | < | | 1.4 | | | |
| Group 5 | Acenaphthene | < | | 17 | | | |
| | Acenaphthylene | < | | N/A | | | |
| | Anthracene | < | | 8300 | | | |
| | Benzidine | < | | 0.000086 | | | |
| | Benzo(a)Anthracene | < | | 0.0038 | | | |
| | Benzo(a)Pyrene | < | | 0.0038 | | | |
| | 3,4-Benzofluoranthene | < | | 0.0038 | | | |
| | Benzo(ghi)Perylene | < | | N/A | | | |
| | Benzo(k)Fluoranthene | < | | 0.0038 | | | |
| | Bis(2-Chloroethoxy)Methane | < | | N/A | | | |
| | Bis(2-Chloroethyl)Ether | < | | 0.03 | | | |
| | Bis(2-Chloroisopropyl)Ether | < | | 1400 | | | |
| | Bis(2-Ethylhexyl)Phthalate | < | | 1.2 | | | |
| | 4-Bromophenyl Phenyl Ether | < | | 54 | | | |
| | Butyl Benzyl Phthalate | < | | 35 | | | |
| | 2-Chloronaphthalene | < | | 1000 | | | |
| | 4-Chlorophenyl Phenyl Ether | < | | N/A | | | |
| | Chrysene | < | | 0.0038 | | | |
| | Dibenzo(a,h)Anthrancene | < | | 0.0038 | | | |
| | 1,2-Dichlorobenzene | < | | 160 | | | |
| | 1,3-Dichlorobenzene | < | | 69 | | | |
| | 1,4-Dichlorobenzene | < | | 150 | | | |
| | 3,3-Dichlorobenzidine | < | | 0.021 | | | |
| | Diethyl Phthalate | < | | 800 | | | |
| | Dimethyl Phthalate | < | | 500 | | | |
| | Di-n-Butyl Phthalate | < | | 21 | | | |
| | 2,4-Dinitrotoluene | < | | 0.05 | | | |
| | 2,6-Dinitrotoluene | < | | 0.05 | | | |
| | 1,4-Dioxane | < | | N/A | | | |
| | Di-n-Octyl Phthalate | < | | N/A | | | |
| | 1,2-Diphenylhydrazine | < | | 0.036 | | | |
| | Fluoranthene | < | | 40 | | | |
| | Fluorene | < | | 1100 | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Hexachlorobenzene | < | | 0.00028 | | | |
| | Hexachlorobutadiene | < | | 0.44 | | | |
| | Hexachlorocyclopentadiene | < | | 1 | | | |
| | Hexachloroethane | < | | 1.4 | | | |
| | Indeno(1,2,3-cd)Pyrene | < | | 0.0038 | | | |
| | Isophorone | < | | 35 | | | |
| | Naphthalene | < | 1 | 43 | No | | |
| | Nitrobenzene | < | | 17 | | | |
| | n-Nitrosodimethylamine | < | | 0.00069 | | | |
| | n-Nitrosodi-n-Propylamine | < | | 0.005 | | | |
| | n-Nitrosodiphenylamine | < | | 3.3 | | | |
| | Phenanthrene | < | | 1 | | | |
| | Pyrene | < | | 830 | | | |
| | 1,2,4-Trichlorobenzene | < | | 26 | | | |
| Group 6 | Aldrin | < | | 0.000049 | | | |
| | alpha-BHC | < | | 0.0026 | | | |
| | beta-BHC | < | | 0.0091 | | | |
| | gamma-BHC | < | | 0.098 | | | |
| | delta BHC | < | | N/A | | | |
| | Chlordane | < | | 0.0008 | | | |
| | 4,4-DDT | < | | 0.00022 | | | |
| | 4,4-DDE | < | | 0.00022 | | | |
| | 4,4-DDD | < | | 0.00031 | | | |
| | Dieldrin | < | | 0.000052 | | | |
| | alpha-Endosulfan | < | | 0.056 | | | |
| | beta-Endosulfan | < | | 0.056 | | | |
| | Endosulfan Sulfate | < | | N/A | | | |
| | Endrin | < | | 0.036 | | | |
| | Endrin Aldehyde | < | | 0.29 | | | |
| | Heptachlor | < | | 0.000079 | | | |
| | Heptachlor Epoxide | < | | 0.000039 | | | |
| | PCB-1242 | < | | N/A | | | |
| | PCB-1254 | < | | N/A | | | |
| | PCB-1221 | < | | N/A | | | |
| | PCB-1232 | < | | N/A | | | |
| | PCB-1248 | < | | N/A | | | |
| | PCB-1260 | < | | N/A | | | |
| | PCB-1016 | < | | N/A | | | |
| | Toxaphene | < | | 0.0002 | | | |
| | 2,3,7,8-TCDD | < | | 0.000000005 | | | |
| Group 7 | Gross Alpha (pCi/L) | < | | N/A | | | |
| | Total Beta (pCi/L) | < | | N/A | | | |
| | Radium 226/228 (pCi/L) | < | | N/A | | | |
| | Total Strontium | < | | 4000 | | | |
| | Total Uranium | < | | N/A | | | |