pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

North East Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0064211**
Facility Type	**Municipal**	APS ID	**629048**
Major / Minor	**Minor**	Authorization ID	**1209936**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Schuylkill Valley Sewer Authority (SVSA)**	Facility Name	**Schuylkill Valley Sewer Authority WWTP**
Applicant Address	PO Box 53 316 Ridge Road	Facility Address	316 Ridge Road (T-770)
	Cumbola, PA 17930-0053		Cumbola, PA 17930
Applicant Contact	Charles Hoslers	Facility Contact	Dean Miller & Deb Balsavage
Applicant Phone	(570) 622-4813	Facility Phone	(610) 587-9957
Client ID	39485	Site ID	622919
Ch 94 Load Status	Not Overloaded	Municipality	**Blythe Township**
Connection Status	No Limitations	County	Schuylkill
Date Application Received	December 4, 2017	EPA Waived?	Yes
Date Application Accepted	December 19, 2017	If No, Reason	-
Purpose of Application	RENEWAL OF EXISTING NPDES PERMIT.		

Summary of Review

This is a NPDES Permit Renewal for a 0.55 MGD POTW discharge to Schuylkill River (CWF; Stream Code# 833). Average Annual Daily Flows were 0.181 MGD (2019), 0.216 MGD (2018), 0.173 MGD (2017) with 0.229 MGD (April 2017). Flows were 0.169 MGD (2016) and 0.173 MGD (2015). Maximum monthly flow was 0.292 MGD in April 2019.

Background:

- **BRADS C&D Landfill Leachate and Wastewaters (SIU with potential passthrough/interference implications)**: This POTW is now accepting BRADS Landfill (C&D Waste) leachate for disposal (and other waste streams such as tire washwater and site-generated sanitary wastewater possibly now and in the future when connected). The BRADS Leachate is presently being hauled-in to the POTW, with BRADS pursuing connection to SVSA collection system/POTW:
  - **Related Correspondence**:
    - 11/14/2018 SVSA "Planned Changes to Waste Stream" Letter initially indicated 15,000 – 25,000 GPD (max daily) of BRADS leachate would be accepted for a year or more. BRADS was noted to be installing a 500,000-gallon aerated leachate storage tank for flow equalization and storage, but not yet generating leachate (i.e. no site-specific leachate data then available). The hauled-in leachate would be discharged into the SBR pre-react tank (via a "quick connection in-line magnetic flow meter"), depending on which SBR tank is in normal operation via a metered connection point. Additional monitoring options (magnetic flow meter, pH, temperature, and conductivity) at the leachate discharge point were being explored. SVSA indicated it would closely monitor the leachate by way of a flow meter and conductivity meter to determine TDS contributions to the POTW (to meet 1,000 mg/l TDS limit).

Approve	Deny	Signatures	Date
X		James D. Berger (signed) James D. Berger, P.E. / Environmental Engineer	January 6, 2021
		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Environmental Engineer Manager	1-11-21

Summary of Review

- 3/22/2019 DEP Letter (BRADS Landfill Leachate Acceptance) authorized the subsequent acceptance of BRADS Leachate, but did require an initial 12-week waste stream sampling program (meeting DEP Target Quantitation Limits) for Total Antimony, Total Cadmium, Total Cobalt, Total Copper, Total Lead, Total Selenium, Total Silver, Total Thallium, 3,3-Dichlorobenzidine, and Toxaphene).
- 9/24/2019 SVSA Letter included the results of the SVSA sampling program. The Letter indicated BRADS has an existing 500,000-gallon aerated leachate storage tank onsite that can be used for flow equalization purposes. 4-5 truckloads/day (20,000 – 30,000 GPD) flows were anticipated. BRADS landfill wastewater was expected to increase SVSA BOD5 and hydraulic loadings over the next five (5) years with a guestimate of 150 EDUs over a 5 – 10-year period.
  - **SVSA indicated it would continue monitoring leachate for TDS and its effects on sludge quality.**
  - It is unclear why BOD5 loadings would increase by 150 EDUs over 5 – 10 years, given available BRADS C&D landfill leachate data (no significant sewage sources). **NOTE**: The revised 2020 Renewal Application did not address BRADS landfill in the Industrial/commercial wastewater contribution section. Expected BRADS leachate/sanitary wastewater flows not identified.
  - Some 12-week sampling results ("all non-detect results" or several insensitive ND results) are subject to the EPA Sufficiently Sensitive Rule (insensitive ND levels are treated as the constituent being present at the insensitive ND concentration):
    - Cadmium: ND at 0.001 mg/l. DEP Target QL at 0.0002 mg/l (0.2 ug/l).
    - Silver: ND at 0.005 mg/l. DEP Target QL at 0.0004 mg/l (0.4 ug/l)
    - 3,3-Dichlorobenzidine: ND level from 0.001 – 0.010 mg/l. DEP Target QL at 0.005 mg/l (5 ug/l).
    - Toxaphene: ND level from 0.001 – 0.010 mg/l. DEP Target QL at 0.0005 mg/l (0.5 ug/l).
- See below for Revised Application information and 2019 Chapter 94 Reported hauled-in wastewater data.

- **SIU**: BRADS is a Significant Industrial User (SIU) and "indirect discharger" for this facility, with SVSA receiving up to 33.9% of the 0.181 MGD ADF Flow of 2019 on days of hauled-in wastewater receipt (i.e. potential for pass-through or interference during SIU wastewater receipt/processing).
  - Landfills are Categorical Industrial Users (IUs) subject to 40 CFR 445 (Landfills).
  - Significant IUs include: "Any other Industrial User that: discharges an average of **25,000 gallons per day** or more of process wastewater to the POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastestream which makes up **5 percent** or more of the average dry weather hydraulic or organic capacity of the POTW Treatment plant; or is designated as such by the Control Authority on the basis that the Industrial User has a **reasonable potential** for adversely affecting the POTW's operation or for violating any Pretreatment Standard or requirement (in accordance with 40 CFR 403.8(f)(6))".
    - 5% of 0.55 MGD (NPDES Permit Basis Flow) is 27,500 GPD.
    - 5% of 0.181 MGD (2019 ADF) is 9,050 GPD.
    - BRADS Quarterly Leachate Reports indicate significant concentrations of assorted metals with reasonable potential (see Reasonable Potential Analysis) such as:
      - 14.2 mg/l Total Iron (exceeding SVSA/BRADS Leachate Treatment Agreement limit of 5.0 mg/l and potentially impacting stream with TMDL (AMD) with no SVSA WLA)
      - 11.2 mg/l Total Manganese (potentially impacting stream with TMDL (AMD) with no SVSA WLA)
      - 92.7 ug/l Total Copper (significantly above new Copper limit)
    - Wastewater volumes are expected to increase if BRADS connects to the SVSA collection system/POTW, as they would no longer be hauling to alternate disposal sites and because the constructed landfill disposal cells' area will increase over time (more infiltration; more need for dust control water).
- **2019 Chapter 94 Report BRADS Leachate Loading to SVSA (not counting BRADS leachate or other wastewater hauled to Schuylkill Haven POTW or other destination)**: 0.181 MGD ADF Flow (including BRADS leachate flows per 2019 Chapter 94 Report). Leachate flows are expected to increase steadily over next 5 years. Trucked-in 2019 leachate volumes were reported at:

Summary of Review

- May: 17,468 GPD (14 days, 244,550 gallons total), ~9.6% of 2019 0.181 MGD ADF flow, compared to 0.23 MGD May monthly average flow (~7.5% of monthly average flow on days of leachate acceptance)
- June: 23,070 GPD (10 days, 230,700 gallons total) compared to 0.171 MGD SVSA monthly average flows (~13.5% of monthly average flow on days of leachate acceptance)
- July: 26,167 GPD (6 days, 157,000 gallons total) compared to 0.148 MGD SVSA monthly average flow (17.6% of monthly average flow on days of leachate acceptance).
- August: 33,700 GPD (3 days, 101,100 gallons total, ~18.6% of 2019 ADF flow) compared to 0.135 MGD SVSA monthly average flow (~24.9% monthly average flow on days of leachate acceptance),
- September: 33,000 GPD (1 day, 33,000 gallons total) compared to 0.129 MGD SVSA monthly average flow **(~25.5% of SVSA monthly average flow on days of leachate acceptance**).
- October: 60,955 GPD (11 days, 670,500 gallons total, ~33.6% of 2019 ADF flow) compared to 0.177 MGD monthly average flow **(~34% monthly average flow on days of leachate acceptance)**
- November: 53,586 GPD (7 days, 375,100 gallons, ~29.6% of 2019 ADF flow) compared to 0.177 MGD monthly average flow **(~30% monthly average flow on days of leachate acceptance).**
- December: No data found in application or 2019 Chapter 94 Report. **NOTE**: BRADS has alternate WWTP (Schuylkill Haven) accepting its leachate and a large existing onsite leachate storage tank.
- Total May – November volume: 1,811,950 gallons, averaging 33,555 GPD (over 7-month period, ~18.5% of 2019 ADF flow on days of leachate acceptance)

- **Future Tie-in to SVSA Collection System/POTW**: The revised application indicated that the SVSA, BRADS Landfill and Blythe Township determined that Blythe Township would proceed with the planning and approvals necessary to construct a sanitary sewer connection into Silver Creek in Blythe Township, Schuylkill County, PA. Blythe Township is currently in the process of preparing an Act 537 Sewage Facilities Plan Update for the installation of the sewer line extension to BRADs. In the event that this Act 537 Plan is approved, as well as the Water Quality Management (WQM) Permit Application for the pumping station and sewer transmission main, the pumping and hauling by BRADs will be discontinued. Following the Act 537 Plan submission to the Department, which is expected in early Spring 2021, Blythe Township intends to submit a WQM Permit Application for the installation of a pumping station and sewer extension for the direct sanitary sewer pipe connection from BRADs Landfill into an existing interceptor in Blythe Township. Blythe Township wishes to construct this sewer line by the end of 2021, if possible.
- **Modification to Hauled-In Wastewater Monitoring Plan**: The revised application indicated the Authority has dropped its original plan for installing additional hauled-in wastewater monitoring equipment on the basis of the future connection as an unnecessary expense. However, their tentative schedule assumed connection by end of 2021, which is not a given due to Planning and WQM permitting requirements.
- **Industrial User Limits**: A copy of the executed Leachate Treatment Agreement and Interim IU Permit and (BRADs) was provided. This IU Discharge Permit is based on the acceptance of hauled-in leachate and will be modified once there is a direct connection from BRADs to the SVSA's collection system, **or when a new NPDES Permit has been issued by the Department, depending on the requirements**. Revised Application included:
  - **1/27/2020 Leachate Treatment Agreement**:
    - Blythe Township Solid Waste Authority (BTSWA) was identified as the owner in the agreement, with an address of 375 Valley Street, New Philadelphia 17959.
    - Blythe Township was identified as the "operator" of the MSW Landfill permit.
    - This agreement set IU limits (not found in the 2020 IU Permit) for:
      - Cyanide, Arsenic, Phenol: 0.5 mg/l
      - Lead, Mercury: 1.0 mg/l
      - Chromium Trivalent, Chromium Hexavalent: 1.0 mg/l
      - Cadmium, Copper, Silver, Tin, and Zinc: 1.0 mg/l
      - **Total Iron: 5.0 mg/l (exceeded in some BRADS Quarterly Untreated Leachate Monitoring Reports)**
      - Other assorted prohibitions: Against interference, radioactives without special permitting, etc.
  - **2020 IU Permit**: Industrial User Discharge Permit (Interim) WWDP-001 (undated effective day or month, but apparently effective 2020 through 2025 unless modified in event of BRADS connection to SVSA collection system/POTW).

Summary of Review

- BRADS is required to install a sampling manhole ("Discharge 001") where all landfill discharges are combined. This would presumably includes site-generated sanitary wastewater and tire washwater being directed to the POTW (in addition to leachate tank sampling unless those wastewaters are being directly added to the leachate storage tank). **NOTE**: This sampling point differs from the BRADS Quarterly Untreated Leachate Monitoring Report sampling point (leachate storage tank) with additional waste streams (tire washwater, site-generated sanitary wastes). It is unknown if this common sampling point has been installed, and how representative would be the sampling results.
- BRADS is required to do monthly sampling and reporting for: **pH (6 – 9 SU), specific conductance, DO, ORP (Redox), BOD5, CBOD5 (25.0 mg/l monthly average; 50.0 mg/l Daily Max, 21 lbs/day), TSS (30.0 mg/l monthly average; 60.0 mg/l Daily Max, 25 lbs/day), Ammonia-N (17.5 mg/l monthly average; 35.0 mg/l Daily Max; 80.5 lbs/day), Nitrate-Nitrite as N, TKN, TN, TP, TDS, Total Calcium, Hardness, Sulfate, Sulfide, Hydrogen sulfide, asbestos, and TOC.** There is apparently a monthly IU DMR form, but none was included in the revised application. Mass loading limit assumed max 50,000 GPD.
- BRADS is required to do quarterly sampling and reporting for: **Aluminum, Total Iron, and Manganese (no limits, not even for Total Iron subject to the Leachate Agreement limit)**. There is apparently a quarterly IU DMR form, but none were provided with the revised application.
    - **Other Leachate Treatment Agreement Metals (see above) are not monitored either monthly or quarterly**.
    - **Leachate is inherently variable, so quarterly sampling would not be enough to detect spiking concentrations (due to incomplete leachate tank mixing; variable precipitation/dilution effects, etc.)**.

▪ **BRADS sampling data**: SVSA provided sampling data for the BRADS leachate, but also BRADS "seeps" and groundwater monitoring wells data that show AMD-impacted groundwater (used operationally for dust control, etc.) but no water supply well sampling data provided.

- BRADS Seeps (SVSA table): Low pH (below 6.0 SU), and high Total Iron (up to 207 mg/l), high Dissolved Iron (up to 40.9 mg/l), and Total Manganese (up to 30.8 mg/l) concentrations (no aluminum data) reported. Seep near leachate tank, reflecting AMD-contaminated groundwater discharge to surface and surface waters.
- Groundwater Monitoring Wells (SVSA table): Data confirms site groundwater is heavily impacted by AMD metals (low pH down to 3.99 SU), high Total Iron (up to 51.6 mg/l), Dissolved Iron, and Manganese, no aluminum data). Groundwater is used for dust control and other purposes onsite.
- Non-SVSA BRADS Quarterly Untreated Leachate Monitoring Reports (Individual IW NPDES Permit No. PA0065137 site-specific form): Potential for spiking, passthrough and interference at the SVSA POTW was shown by BRADS own reporting.
    - Available Quarterly Untreated Leachate Monitoring Reports indicated leachate concentrations of up to: 14.2 mg/l Total Iron; 11.2 mg/l Total Manganese; 0.414 mg/l Total Aluminum, 0.267 mg/l Total Zinc, and 92.7 ug/l Total Copper.
    - BRADS has not been completing this required form adequately, resulting in limited available leachate data from BRADS itself. Only one (1) received BRADS Report (Third Quarter 2020) addressed the majority of NPDES priority pollutants. Therefore, there is a very limited data set for NPDES Pollutant Group constituents. Also, this BRADS Landfill NPDES Permit-specific reporting requirement would terminate upon connection to the SVSA collection system/POTW as BRADS would then seek to terminate their existing Individual IW NPDES Permit.

- **DRBC Docket No. D-2012-029 CP-2 (issued 6/10/2020)**: Updated to include BRADS leachate receipt. Imposed TDS limit that is being incorporated into this permit per Chapter 92a.12. BOD5 influent monitoring and 85% CBOD5 minimum monthly average reduction limit specified. The docket holder is also required to perform quarterly true color effluent monitoring for 2 years (8 total tests). The color monitoring shall commence after the WWTP starts receiving wastewater from the Blythe Township Recycling and Demolition Landfill.
- **New Ammonia-N WQS (effective upon EPA Approval)**: The new WQS is awaiting EPA approval but not now in effect. Preliminary calculation indicates the new Ammonia-N WQS might reduce the Ammonia-N limit to 11.49 mg/l monthly and 22.98 mg/l IMAX. This is slightly more stringent than the calculated 11.6 mg/l/23.2 mg/l Ammonia-N

Summary of Review

limits (Summer) that would supersede the existing limits (17.5 mg/l monthly average during summer). The Ammonia-N limit will be re-evaluated in the next NPDES Permitting if not addressed during the Ammonia-N Schedule of Compliance.

- **Sewage Sludge/Biosolids**: Facility treats site-generated sludge in two existing reed drying beds (2 additional drying beds were permitted but not built). None hauled offsite for disposal in 2019. Facility beneficially uses biosolids under GP No. PAG08223. 18.2 dry tons generated. SVSA reports: "According to the 2020 Biosolids sampling conducted in October 2020, the metals concentration within the Biosolids are still well within the ceiling and regulatory limitations for metals in order to meet the PAG-08 General Permit".

Special Conditions: Changes bolded.

- **Part A.I**:
  - **Outfall No. 001:**
    - **New Footnote Requirement: "Effluent sampling shall be scheduled to coincide with acceptance of hauled-in landfill leachate when possible, with dates of leachate acceptance reported in DMR comment section.": Representative effluent sampling must take into account potential for pass-through and/or interference events impacting effluent quality. The incoming hauled-in leachate were averaging ~18% of 2019 ADF flows upon days of receipt (some days consecutive, some separated) with variable leachate quality. Sampling at other times might not be representative of effluent quality.**
    - Changed UV transmittance name to UV Instantaneous Minimum Intensity in this permit. (Correct units for UV intensity in previous permit; DMRs use UV intensity as well).
  - **IMP/Outfall No. 101**: **This is at the influent headworks sampling for raw sewage influent.**
  - **IMP/Outfall No. 102: This is for hauled-in BRADS wastewater that is directed into the SBRs' Pre-react Zones (not going through headworks and existing influent sampling point) to allow determination of Chapter 94 influent loadings, BOD5/TSS minimum monthly average reduction (Chapter 92a.47), and any needed BRADS Leachate monitoring/reporting (including TMDL AMD metals: Aluminum, Manganese, and Total Iron and other constituents upon request). The facility indicated planned installation of flow meter. Sampling would be done via grab-composite sampling of incoming trucks (composited for analysis) and/or other approved methodology**.
- **Parts C.I.A, B, & C**: Existing Standard conditions (stormwater prohibition; necessary property rights; proper management of residuals).
- **Part C.I.D**: **Updated** Chlorine Minimization with EDMR reporting language (already had explicit TRC limits in case chlorine is used for any purpose). The facility does not use chlorine as a back-up for chlorine disinfection.
- **Part C.I.E**: Existing Site-specific condition in event of changes in facility effluent or receiving stream.
- **Part C.I.F**: **New condition requiring Part II WQM permit mod prior to constructing the remaining two reed drying beds due to potential changes in technology standards since original permitting. No third SBR can be constructed without Planning Approval/Expansion as the two existing SBRs were indicated to have the same capacity as the original three (smaller) SBR units approved.**
- **Part C.I.G: New requirement to submit Pollutant Groups 1 through 7 analysis within 60 days of Department request (due to potential issues of spiking BRADS leachate constituents).**
- **Part C.II: New Ammonia-N and Dissolved Oxygen 3-Year Schedule of Compliance due to more stringent limits.**
- **Part C.III**: **New Toxics WQBEL Condition (Copper; etc.) per Reasonable Potential Analysis. 3-Year schedule of Compliance.**
- **Part C.IV: New Solids Management Conditions (including reed bed volume monitoring and onsite record-keeping)**
- **Part C.V**: **New WQBELs Below Quantitation Limits (Toxaphene and 3,3-Dichlorobenzidine)**

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

Summary of Review
request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.55
Latitude	40º 42' 30.35"	Longitude	-76º 8' 48.03"
Quad Name	Pottsville	Quad Code	1336 (6.19.4)
Wastewater Description:	Sewage Effluent		

Receiving Waters	Schuylkill River	Stream Code	833
NHD Com ID	25991268	RMI	121 (per DRBC Docket)
Drainage Area	23.4	Yield (cfs/mi^2)	0.1444
Q_{7-10} Flow (cfs)	3.38	Q_{7-10} Basis	USGS PA Streamstats
Elevation (ft)	~660 Feet	Slope (ft/ft)	-
Watershed No.	3-A	Chapter 93 Class.	CWF, MF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-

Assessment Status	Impaired for Aquatic life and recreational use		
Cause(s) of Impairment	Flow regime modification, Habitat alterations, (AMD) Metals, (AMD) Siltation; **Pathogens (Source Unknown)**		
Source(s) of Impairment	Acid mine drainage, Channelization, Highway/road/bridge runoff (non-construction related), Urban runoff/storm sewers		
TMDL Status	Final, Final	Name	Schuylkill River PCB TMDL, 3/28/2007 Upper Schuylkill River TMDL

Background/Ambient Data		Data Source
pH (SU)	6.81	2/28/2019 Sample ID: 2281503, Sequence Number: 408, about 0.17 miles upstream of Outfall 001.
Temperature (°C)	4.4	See above
Hardness (mg/L)	77	See above
TSS (mg/l)	<5	See above
TDS (mg/l)	142	See above
Aluminum (ug/l)	395	See above (limited assimilative capacity)
Manganese (ug/l)	819	See above (limited assimilative capacity)
Total Iron (ug/l)	1170	See above (limited assimilative capacity)
Copper (ug/l)	<4.00	See above
Lead (ug/l)	<1.00	See above
Zinc (ug/l)	54.1	See above

Nearest Downstream Public Water Supply Intake			
	PA AMER GLEN ALSACE EXETER WATER SYS ID# 101174-077, Robeson Township, Berks County (inactive SF). DRBC Docket indicated Pottsville Borough Authority intake was closest, 65 miles downstream.		
PWS Waters	Schuylkill River	Flow at Intake (cfs)	-
PWS RMI	-	Distance from Outfall (mi)	See above

Changes Since Last Permit Issuance:

- **Natural Trout Reproduction stream (limit Big Ck dnst to RR bridge in NW sector of Schuylkill Haven).**
- **Outfall #001 latitude/longitude updated.**
- **Stream pathogen impaired**.

Other Comments:

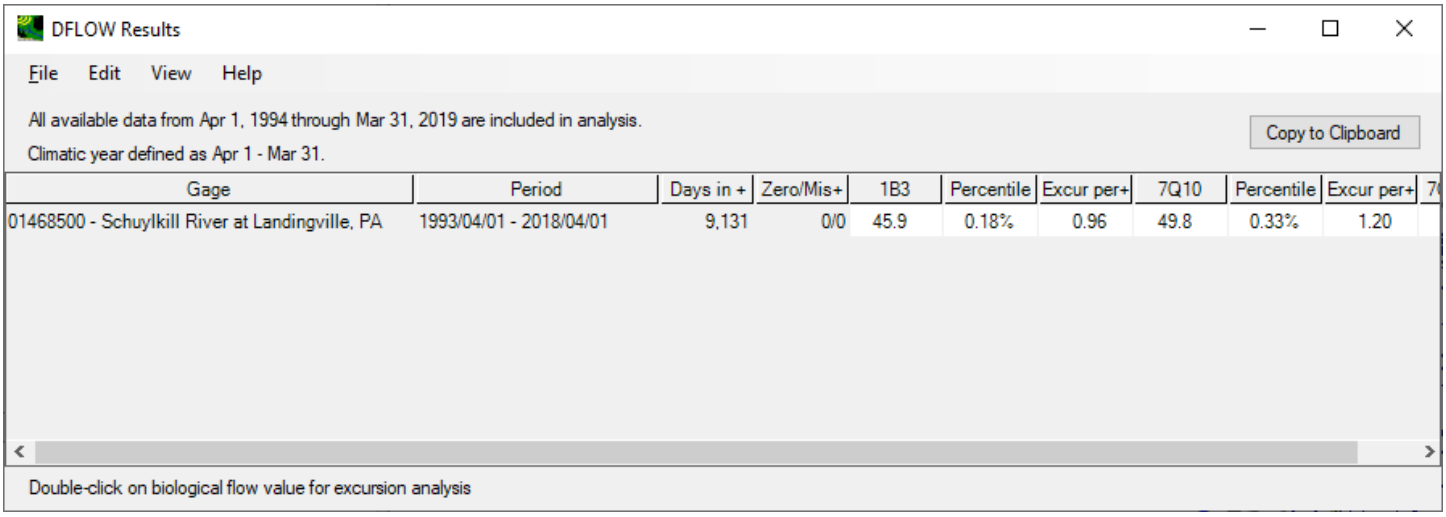
- **Stream Impairment causes**:
  - **AMD Metals**: Facility now receiving C&D landfill leachate flows (hauled-in) with relatively high AMD metal concentrations per BRADS Landfill Quarterly Untreated Leachate Monitoring Reports (0.411 mg/l Aluminum, 11.2 mg/l Manganese, 14.2 mg/l Total Iron) at up to ~33% ADF in 2019. AMD metals can also be found in domestic wastewater (reuse of AMD-impacted source water; AMD-impacted I&I; Industrial Users including landfills). AMD discharges are located within the immediate area with other historic mining impacts. The watershed TMDLs (Upper Schuylkill TMDL AMD, and Schuylkill River TMDL PCB) set no Waste Load Allocations (WLAs) for this POTW. **Due to BRADS Landfill's high raw leachate AMD metal values, the permit will include new AMD metal effluent limits based on the TMDL WQS**:

Parameter	Criterion Value (mg/l)	Total Recoverable/Dissolved
Aluminum (Al)	0.75	Total Recoverable
Iron (Fe)	1.50	30-day average; Total
Manganese (Mn)	1.00	Total Recoverable

:

  - **PCBs**: A Sewage Facility would not be expected to be a significant source of PCBs. There are no identified other industrial users except BRADS Landfill (C&D leachate) which should not be receiving PCBs. 9/25/2018 Influent sampling indicated <0.52 ug/l influent PCB/Pesticides (Arochlor) constituents. See Effluent Section for BRADS leachate-related considerations.
  - **Pathogens:** Schuylkill River is impaired by pathogens (source unknown) per E-maps. Facility has reported some high Fecal Coliform IMAX exceedances, that the consultant thought might be due to lab contamination. However, that assumption has not been verified. Existing Permit limits and UV intensity monitoring will be protective of the receiving stream. BRADS does not receive sewage sludges and the BRADS leachate/wastewater will be treated by SVSA.
  - **DO:** Dissolved Oxygen has not been identified as a cause of stream impairment, but known causes of stream impairment can mask other causes. In event of SVSA POTW upgrades (installation of additional drying beds or others), it is recommended that consideration be given to post-aeration measures to meet potential non-summer DO Natural Trout (Salmonid) Reproduction limits (Chapter 93.7). This permit will gather DO effluent data in the meantime.
  - **Habitat Alterations, Contaminated Stormwater Runoff (urban and highway), and Siltation:** The POTW is not expected to add to any existing impairment from these causes.
- **Updated Outfall Coordinates:** Updating was required because previous outfall location coordinates not on Schuylkill River, and conflicting application information regarding whether old permit coordinates were for the WWTP or for the Outfall discharge point. The updated USGS figure (based on EPA information per consultant) shows the outfall at the Blythe Township/East Norwegian Township boundary line. E-maps showed the outfall location latitude & longitude over the border, with the E-map civil division query indicating area as both Blythe Township and East Norwegian Township. DEP M&C confirmed location is in Blythe Township.
- **Q7-10 Low Flow:**
  - **PAStreamstats: Q7-10 low flow of 3.36 CFS from a 23.3 square mile drainage area (i.e. 0.1444 CFS/square mile LFY).**
  - Previous NPDES Permitting**:** The Q7-10 low flow was previously based the original 2002 NPDES permitting Low Flow Yield assumption from the USGS Gate #01467470 (Schuylkill River at Port Carbon, PA) from the 1977 PA Bulletin No. 12 (based on 5.5 CFS Q7-10 flow from 27 square miles, derived from 1949-1950; 1963-1964 flow data using 36 measurements correlated to the (~1.4 miles downstream) USGS Gage (Schuylkill River at Pottsville) below the confluence with Mill Creek). The PA Bulletin No. 12 correlations are no longer recommended for use by the USGS and have been replaced by PA Streamstats (which incorporated all available stream data including Stream gages) with scientifically supported regression equations.
  - Closest Downstream USGS Gage with current monitoring data: USGS 01468500 Schuylkill River at Landingville, PA, 133 square miles drainage area, located at: Lat 40º37'45", long 76º07'30", 470.64 ft above National Geodetic Vertical Datum of 1929. Overall Gaged area LFY estimated at: 0.3744 CFS/square miles. **However, this data is not considered representative of outfall location conditions due to assorted AMD discharges between Outfall and downstream gage (i.e. greater**

low flow/base flow due to AMD discharges). PA Streamstats took this gage's data into account in calculating the low flows.



Treatment Facility Summary

Treatment Facility Name: Schuylkill Valley Sewer Authority WWTP

WQM Permit No.	Issuance Date	Scope
5403405	1/22/2004	Installation of new sewage collection (~140,000 LF) , conveyance and treatment system for Schuylkill Township, Blythe Township, Middleport Borough and New Philadelphia Borough. **Per previous Renewal Fact Sheet referencing the WQM IRR,** the WWTP was permitted to include an influent pump station; headworks with automated bar screen; **three (3) SBR units (only two existing onsite)** using the "Intermittent Cycle Extended Aeration System (ICEAS); and a UV disinfection system per previous Renewal Fact Sheet. Sludge is sent to two (2) aerobic digesters, and then pumped to **four (4) reed-planted drying beds (only two existing onsite)**. They estimated sludge removal frequency at every 7 to 10 years. NOTE: The facility was constructed circa 2006 per Chapter 94 Reports. See below regarding as-built POTW.
PAG082223	8/11/2016	General Permit for beneficial use of Exceptional Quality biosolids

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	ICEAS Sequencing Batch Reactor	Ultraviolet	0.55

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.55 (as permitted)*	1147 (as permitted)*	Not Overloaded	Aerobic digestion and Drying via two sludge drying beds	Land application

***As-built POTW differs from original WQM permitted design as discussed below.**

Changes Since Last Permit Issuance:

- Facility modified to allow for receipt of BRADS Landfill' hauled-in C&D landfill leachate at SBR influent pre-react zone.
    - Updated NPDES Application Description: The wastewater flow is pumped directly to the Headworks Building, where it is screened by the automated bar screen. Screening is followed by an Intermittent Cycle Extended Aeration System (ICEAS) designed and developed by Austen Bio-jet, which is a variation of the standard Sequencing Batch Reactor (SBR) plant process. **Hauled-in leachate is also discharged into the Pre-Aeration Tanks or spare Sludge Holding Tank, where it is then metered into the two (2) process trains, as needed.** The decanted effluent from the SBR units flows by gravity to an Ultra-violet (UV) disinfection system (consisting of one primary and one backup unit). After disinfection, the effluent flows by gravity for discharge to the Schuylkill River. Solids handling is accomplished by two (2) aerobic sludge digesters and two (2) sludge drying Reed Beds. The digested sludge is pumped to the Reed Beds for dewatering and stabilization, and it is eventually hauled-out for disposal by Beneficial Re-Use by way of land application.
    - DRBC Docket Description: The WWTP facilities consist of an influent pump station, an automated bar screen, two (2) SBR treatment trains, two (2) aerobic sludge digester tanks, two (2) reed bed tanks, and two (2) ultraviolet light (UV) disinfection units. **To accommodate flow from the area served modification (BRADS landfill), the docket holder proposes to install a metered quick-connect pipe that will connect to the SBR pre-react tanks.**
- SVSA is exploring direct connection of BRADS Landfill to the SVSA collection system/POTW, which would mean that higher daily flows would be expected during peak leachate generation periods (rainy seasons).

Other Comments:

- **Facility was not constructed as originally permitted**.
    - Revised NPDES Permit Application provided the following clarifications:
        - From our records, the SVSA's original design had proposed to use three (3) modified, SBR package wastewater treatment systems, which would each include a pre-aeration tank. Only two (2) package SBR treatment systems were actually constructed at the SVSA WWTP, each with its own pre-aeration tank. The original design appears to have included three (3) SBRs, each rated for 183,000 gpd, and each with its own pre-aeration tank and a total treatment plant design capacity of 550,000 gpd. **However, two (2) SBR tanks were installed, each with a treatment capacity of 275,000 gpd, or a total treatment capacity of 550,000 gpd. Therefore, the wastewater treatment plant design capacity has not been modified, and it is still rated for 550,000 gpd, but with a different tank configuration than previously proposed**.
        - The WQM Module 1 has been attached for your reference (see Exhibit F), as well as a copy of the remaining WQM Modules and the Design Engineer's Report. The WQM Permit contains design loading data, which includes flow data and equivalent populations served.
        - The WWTP is permitted for an average daily flow of 0.55 Million Gallons per day (MGD), and a design peak flow capacity of 1.65 MGD.
        - No organic loading design capacities were provided in Module 1 of the original WQM Permit Application. However, the Design Engineer's Report in Exhibit F contains WWTP organic loadings based on 250 mg/L BOD5 and the permitted design flow of 0.55 MGD. Therefore, the permitted organic loading capacity of the WWTP is 1,147 lbs/day in the approved design.
        - The Authority has confirmed that the two as-built SBRs (275,000 GPD each) have the same total hydraulic capacity as the original three SBR design (183,000 GPD each).
- Organic Design Capacity: No copy of the Construction Certification or design deviation correspondence was provided to verify this change was authorized by the Department. No manufacturer information was provided to verify the as-built SBRs were designed to treat the original 250 mg/l BOD5 influent loading at 0.55 MGD design flow.
    - The available DEP files were missing any construction certification and/or correspondence about any significant design deviation from original WQM permitting.
    - **It is recommended that any Planning update include documentation from either the WQM Permit-required construction certification and/or manufacturer information (two larger SBRs) to confirm that the two SBRs have the permitted organic design capacity**.
- Sludge Drying Beds: Additionally, the original design and permitting had proposed four (4) sludge (reed) drying beds, each with a capacity of 7,250 square feet, or 29,000 square feet of reed bed area total. However, only two (2) reed beds were actually constructed back in 2006, providing only 14,500 square feet of drying bed capacity at the SVSA WWTP, with a proposed loading of 40 gallons per square foot per year. **NOTE**: Construction of the two remaining drying beds would now require a Part II WQM permit application due to potential changes in technology standards plus required DRBC Docket updating (only identified two SBRs and two Reed beds).
- Biosolids: Land application of biosolids at Richard Farm in Oley Township, Berks County. They produced 38.14 dry tons in 2016.
- **2018/2019 Chapter 94 Report Information**: Reports prepared by Spotts, Stevens, and McCoy.
    - Form Items 1, 2, 6, and 9 (Attachments A, B, C):
        - No existing or projected overloading **but they only sample influent BOD5 every quarter (NPDES reporting requirement, and not allowing for calculation of minimum monthly average reduction**).
        - They attribute a weak BOD5 influent loading of **0.074 pounds per capita per day** (compared to default DEP design number of **0.170 ppcd**) on nature of communities without any major commercial/industrial sources.
            - The current estimated number of equivalent dwelling units (EDUs) served by the SVSA WWTP is approximately 1,658 EDUs. They estimated 30 connections remain to be connected in the service area.
            - Original WQM permitting assumed ultimate service area build out at 1,939 EDUs at 262.5 GPD/EDU and 0.17 lbs BOD/capita/day.
            - See background section for related information.
        - November 2014 overloading occurred (with spiking in June 2014) which they blamed on an anomaly (possibly due to flow meter malfunction) due to high wet weather flows. A more accurate

flow meter was installed in November 2014. No recurrence of organic overloading or similar spiking since.

- The Revised Application had the following information:
  - **Municipality sources**:
    - Schuylkill Township (including Brockton and Tuscarora), Blythe Township (including Cumbola and Kaska), Middleport Borough and New Philadelphia Borough. The application indicates that nearly all sewer connections have been made in accordance with the Act 537 Planning.
    - The NPDES permit application Trib Information indicated a total service population of ~4,896 (Schuylkill Township, Blythe Township, Middleport Borough and New Philadelphia Borough combined).
  - **Additional Application information (after Department question on weak influent):**
    - Only ~20 out of >1,600 residences remain unconnected per application.
    - Weak influent loading per capita attributed to nature of service area (single family homes, row homes, elderly and/or retired residents, little development, and no large commercial establishments or industry) in 2019 Chapter 94 Report.
    - Application noted that nearly all sewer connections have been made in accordance with the Act 537 Planning, with the exception of the few (~20) blighted or abandoned properties within the sewer service area.
- **2019 Chapter 94 Report**: No existing or projected overloading.
  - 1,638 Existing EDUs; 2.32 persons/EDU; 0.149 Load/EDU; 0.065 lbs/Capita (below normal DWFM default assumption). EDUs projected to increase at 30 EDUs/year (attributed to BRADS landfill loading without further explanation).
  - 0.181 MGD ADF flow for 0.55 MGD facility in 2019.
  - 245 lbs BOD5/day average loading (332 max monthly average) for 1,147 lbs BOD5/day organic design capacity. NOTE: 2019 Chapter 94 Report did not include influent flow meter calibration with the quarterly (only) BOD5 influent monitoring, so biasing is a potential factor here.

- Form Item 5 (Sewer System monitoring, maintenance, repair and rehab (Attachment D) and Item 6 (Condition of Sewer system (Attachment E)): They use a contractor (Miller Environmental Inc.) to operate, monitor, repair, and perform preventative maintenance on sewer system and WWTP. No repairs were needed by the sewer system in 2018. They continue to do a private property inspection program to identify any illegal connections with SVSA notification of property owners of findings and requirement to repair.
- Form Item 7 (Pump Stations (Attachment F)): They have four (duplex submersible pumps) pump stations but only record flow at Influent Pump Station (Ridge Road) based on pump run time. The other three pump stations are estimated based on number of connections and run-times for each pump:
  - Influent Pump Station (Ridge Road): 1.656 MGD rated capacity
  - Middleport Pump Station (SR 209): 0.669 MGD rated capacity
  - Kaska Pump Station (East Kaska): 0.086 MGD rated capacity
  - New Philadelphia Pump Station (Elliot Street): 0.036 MGD rated capacity.
- Form Item 8 (Industrial Wastes): **They indicated this section as NA. This section is now applicable due to receipt of BRADS leachate in 2019 onward.**
- Form Item 10 (Sewage Sludge Inventory (Attachment G)): Synagro took their reed beds biosolids last time. They only haul away on an as-needed basis, once Reed beds reach capacity (estimated to happen every 5-10 years. No sludge was hauled away in 2018. Part I Biosolids Quality Certification form attached (Reed Bed Composite) with 270 mg/kg Copper, 24.8 mg/kg Lead, and 319 mg/kg Zinc. **NOTE**: Future biosolids quality might change due to receipt of BRADS Landfill leachate.

Compliance History

DMR Data for Outfall 001 (from September 1, 2019 to August 31, 2020)

Parameter	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19
Flow (MGD) Average Monthly	0.162	0.156	0.214	0.197	0.233	0.166	0.163	0.162	0.145	0.177	0.177
Flow (MGD) Daily Maximum	0.476	0.229	**1.066**	**0.814**	**1.081**	0.278	0.229	0.507	0.184	**0.725**	0.514
pH (S.U.) Minimum	6.4	6.3	6.1	6.0	6.2	6.3	6.2	6.2	6.3	6.0	6.2
pH (S.U.) Maximum	7.1	6.9	6.8	6.9	6.9	7.0	7.0	6.7	6.6	6.6	6.6
CBOD5 (lbs/day) Average Monthly	9	< 3	< 5	< 11	15	10	6	8	< 4	< 3	< 5
CBOD5 (lbs/day) Weekly Average	22	4	8	28	32	16	8	10	7	< 3	13
CBOD5 (mg/L) Average Monthly	7.7	< 2.5	< 3.4	< 7.6	6.3	6.9	5.2	6.4	< 3.5	< 2.1	< 3.7
CBOD5 (mg/L) Weekly Average	20.1	3.7	5.3	14.5	8.4	10.9	8.8	9.5	6.0	2.4	7.8
BOD5 (mg/L) Influent Average Monthly			424			231			101		
TSS (lbs/day) Average Monthly	2	< 1	2	6	16	< 7	9	< 5	< 2	< 2	4
TSS (lbs/day) Weekly Average	3	< 2	3	11	37	5	13	9	4	2	7
TSS (mg/L) Average Monthly	2.0	< 1.0	1.6	4.5	6.3	< 4.6	7.3	< 5.0	< 1.6	< 1.5	3.0
TSS (mg/L) Influent Average Monthly			213			56			116		
TSS (mg/L) Weekly Average	3.0	1.0	2.0	10.0	14.0	3.0	11.0	9.0	3.0	2.0	6.0
Total Dissolved Solids (mg/L) Average Monthly			330			249			292		
Fecal Coliform (CFU/100 ml) Geometric Mean	< 10	< 2	< 5	< 29	< 2	< 1	< 2	< 3	< 9	< 4	< 2

Fecal Coliform (CFU/100 ml) Instantaneous Maximum	30	10	350	490	10	< 1	10	120	640	180	90
UV Intensity (µw/cm²) Minimum	5.43	5.51	5.59	5.66	5.23	5.23	5.23	5.14	5.23	5.33	5.43
Nitrate-Nitrite (lbs/day) Average Monthly			1.85			0.98			2.97		
Nitrate-Nitrite (mg/L) Average Monthly			1.46			0.90			3.12		
Total Nitrogen (lbs/day) Average Monthly			20.49			24.69			5.35		
Total Nitrogen (mg/L) Average Monthly			16.16			22.60			5.63		
Ammonia (lbs/day) Average Monthly	19.6	20.8	14.3	10.5	32.7	22.7	18	16.5	6.7	4.1	3.6
Ammonia (mg/L) Average Monthly	**16.5**	**14.0**	**10.7**	**9.0**	12.7	16.3	15	14.4	5.5	3.3	**2.6**
TKN (lbs/day) Average Monthly			18.63			23.71			2.39		
TKN (mg/L) Average Monthly			14.70			21.70			2.51		
Total Phosphorus (lbs/day) Average Monthly			9.84			5.68			1.54		
Total Phosphorus (mg/L) Average Monthly			7.76			5.20			1.62		
Total Aluminum (mg/L) Average Monthly									< 0.04		
Total Iron (mg/L) Average Monthly									0.08		
Total Manganese (mg/L) Average Monthly									0.064		

DMR Data for Outfall 001 (from October 1, 2018 to September 30, 2019)

Parameter	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18
Flow (MGD) Average Monthly	0.1293	0.1348	0.148	0.171	0.230	0.292	0.190	0.177	0.209	0.219	0.245	0.153
Flow (MGD) Daily Maximum	0.1860	0.2900	0.260	0.314	0.573	**1.436**	0.603	0.263	**0.936**	**1.001**	0.547	0.319
pH (S.U.) Minimum	6.2	6.1	6.1	6.1	6.1	6.0	6.0	6.4	6.2	6.1	6.0	6.1
pH (S.U.) Maximum	6.6	6.7	6.5	6.6	6.6	6.6	6.7	6.9	6.9	6.8	6.4	6.6
CBOD5 (lbs/day) Average Monthly	3	< 2	5	< 3	< 7	5	9	11	10	< 5	< 5	< 3
CBOD5 (lbs/day) Weekly Average	4	< 3	7	< 3	10	8	13	15	17	10	7	4
CBOD5 (mg/L) Average Monthly	2.8	< 2.0	4.4	< 2.3	< 4.6	4.0	7.0	8.0	7.4	< 4.3	< 2.0	< 2.4
CBOD5 (mg/L) Weekly Average	3.6	< 2.0	6.0	3.0	6.0	5.0	11.0	10.0	12.0	8.0	2.0	3.0
BOD5 (mg/L) Influent Average Monthly	222			171			180			255		
TSS (lbs/day) Average Monthly	3	< 1	5	2	5	10	6	12	8	3	6	< 2
TSS (lbs/day) Weekly Average	5	1	8	3	13	23	12	19	20	5	11	6
TSS (mg/L) Average Monthly	2.8	< 1.0	3.8	1.8	3.4	6.2	4.5	9.5	6.0	2.3	3.3	< 1.8
TSS (mg/L) Influent Average Monthly	200			127			143			188		
TSS (mg/L) Weekly Average	4.0	1.0	7.0	3.0	9.0	11.0	9.0	15.0	14.0	4.0	7.0	4.0
Total Dissolved Solids (mg/L) Average Monthly	277			227			234			257		
Fecal Coliform (CFU/100 ml) Geometric Mean	**< 15**	**< 55**	**< 10**	**< 79**	**< 9**	**< 2**	**< 14**	**< 28**	**< 9**	**118**	**< 12**	**< 24**
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	**920**	**720**	**180**	**4100**	**60**	**90**	**240**	**150**	**490**	**360**	**80**	**170**
UV Intensity (µw/cm²) Minimum	**5.53**	**5.35**	**5.09**	**5.12**	**4.79**	**4.83**	**4.92**	**5.01**	**5.09**	**5.16**	**5.24**	**5.33**

Nitrate-Nitrite (lbs/day) Average Monthly	2			2			3			4		
Nitrate-Nitrite (mg/L) Average Monthly	1.16			1.46			2.05			2.97		
Total Nitrogen (lbs/day) Average Monthly	11			13			34			8		
Total Nitrogen (mg/L) Average Monthly	7.25			7.62			24.35			5.86		
Ammonia (lbs/day) Average Monthly	5.6	2.6	4.8	5.2	7.0	11	18	30	29	11	4	3.0
Ammonia (mg/L) Average Monthly	**5.7**	**2.5**	**4.1**	**3.7**	**4.7**	8.96	14.03	23.3	21.9	8.99	1.55	**2.5**
TKN (lbs/day) Average Monthly	9			10			31			4		
TKN (mg/L) Average Monthly	6.09			6.16			22.3			2.89		
Total Phosphorus (lbs/day) Average Monthly	7			4			1			3		
Total Phosphorus (mg/L) Average Monthly	4.43			2.48			0.79			2.02		
Total Aluminum (mg/L) Average Monthly										**0.107**		
Total Iron (mg/L) Average Monthly										**0.15**		
Total Manganese (mg/L) Average Monthly										**0.0386**		

DMR Data for Outfall 001 (from November 1, 2016 to October 31, 2017)

Parameter	OCT-17	SEP-17	AUG-17	JUL-17	JUN-17	MAY-17	APR-17	MAR-17	FEB-17	JAN-17	DEC-16	NOV-16
Flow (MGD) Average Monthly	0.155	0.138	0.156	0.208	0.168	0.181	0.229	0.184	0.139	0.158	0.154	
Flow (MGD) Daily Maximum	0.348	0.189	0.357	0.706	0.289	0.368	**1.096**	0.360	0.240	0.217	0.200	
pH (S.U.) Minimum	6.1	6.1	6.0	6.0	6.1	6.2	6.0	6.2	6.1	6.2	6.2	

pH (S.U.) Maximum	6.5	6.4	6.4	6.4	6.4	6.4	6.5	6.5	6.4	6.6	6.6	
CBOD5 (lbs/day) Average Monthly	< 3	7	< 4	< 4	< 5	11	< 7	< 6	< 4	< 3	< 3	
CBOD5 (lbs/day) Weekly Average	5	9	7	5	12	26	17	10	6	5	< 3	
CBOD5 (mg/L) Average Monthly	< 2.8	5.7	< 4.0	< 2.6	< 4.0	8.2	< 4.4	< 3.3	< 3.4	< 2.3	< 2.0	
CBOD5 (mg/L) Weekly Average	4.0	8.4	5.8	3.4	9.5	21.7	10.9	5.7	5.0	3.1	< 2.0	
TSS (lbs/day) Average Monthly	< 2	5	< 5	7	8	< 8	< 7	6	< 5	< 4	< 4	
TSS (lbs/day) Weekly Average	4	9	12	10	18	22	16	10	6	8	5	
TSS (mg/L) Average Monthly	< 1.8	4.4	< 4.6	5.0	6.3	< 6.5	< 4.6	3.9	< 4.1	< 2.8	< 3.1	
TSS (mg/L) Weekly Average	3.0	6.4	10.0	6.4	14.4	18.0	10.5	5.3	5.2	4.8	4.8	
Fecal Coliform (CFU/100 ml) Geometric Mean	**< 4**	**< 13**	**97**	**125**	**< 9**	**79**	**113**	**33**	**55**	**< 43**	**< 18**	
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	**50**	**590**	**2000**	**240**	**390**	**11000**	**590**	**660**	**140**	**370**	**90**	
UV Intensity ($\mu w/cm^2$) Minimum	**20.53**	**17.05**	**15.27**	**15.28**	**13.85**	**11.81**	**11.82**	**12.0**	**10.55**	**8.6**	**8.61**	
Ammonia (lbs/day) Average Monthly	4.0	10.0	4.0	0.9	3.0	3.0	15	8	4	10	6.2	
Ammonia (mg/L) Average Monthly	**3.2**	**7.4**	**3.2**	**0.6**	**1.9**	**2.1**	10.4	4.62	3.6	7.1	5.1	

Compliance History

Summary of Inspections:

SITE NAME	INSP PROGRAM	INSPECTED DATE	INSP TYPE	INSPECTION RESULT DESC	# OF VIOLATIONS
SCHUYLKILL VALLEY SEW AUTH WWTP	WPCNP	06/23/2020	Routine/Partial Inspection	No Violations Noted	0
SCHUYLKILL VALLEY SEW AUTH WWTP	WPCNP	03/06/2020	Administrative/File Review	No Violations Noted	0
SCHUYLKILL VALLEY SEW AUTH WWTP	WPCNP	01/27/2020	Administrative/File Review	Violation(s) Noted	1
SCHUYLKILL VALLEY SEW AUTH WWTP	WPCNP	03/05/2019	Administrative/File Review	No Violations Noted	0
SCHUYLKILL VALLEY SEW AUTH WWTP	WPCNP	09/26/2018	Compliance Evaluation	No Violations Noted	0
SCHUYLKILL VALLEY SEW AUTH WWTP	WPCNP	04/02/2018	Compliance Evaluation	No Violations Noted	0
SCHUYLKILL VALLEY SEW AUTH WWTP	WPCNP	04/20/2017	Compliance Evaluation	No Violations Noted	0
SCHUYLKILL VALLEY SEW AUTH WWTP	WPCNP	03/01/2017	Compliance Evaluation	No Violations Noted	0
SCHUYLKILL VALLEY SEW AUTH WWTP	WPCNP	08/10/2016	Routine/Partial Inspection	No Violations Noted	0
SCHUYLKILL VALLEY SEW AUTH WWTP	WPCNP	12/09/2015	Routine/Complete Inspection	No Violations Noted	0
SCHUYLKILL VALLEY SEW AUTH WWTP	WPCNP	05/12/2015	Compliance Evaluation	No Violations Noted	0

Other Comments:

- Application was due December 2, 2017. Application was not complete until December 19, 2017.
- Facility had some recurring pH and fecal coliform violations in the 2017-2019 time-frame.
- **WMS Open Violations by Client Number Query**: One (1) open violation per 12/28/2020 WMS Query (Open violations by client number).

FACILITY	INSP PROGRAM	INSP ID	VIOLATION ID	VIOLATION DATE	VIOLATION
SCHUYLKILL VALLEY SEW AUTH	WPC NPDES	3008016	879479	01/27/2020	NPDES - Violation of effluent limits in Part A of permit

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .55
Latitude 40º 42' 30.00" **Longitude** -76º 8' 48.00"
Wastewater Description: Sewage Effluent

Permit Limits & Monitoring: Changes bolded

Parameter	Limit (mg/l unless otherwise specified)	SBC	Model/Basis
CBOD5	115 Lbs/d 184 Lbs/d 25.0 40.0 50.0	Monthly Average Weekly Average Monthly Average Weekly Average IMAX	Existing Technology limit (Chapter 92a.47) supported by water quality modeling. Application data: 25.4 mg/l max and 4.98 mg/l average (118 samples).
TSS	139 Lbs/d 208 Lbs/d 30.0 45.0 60.0	Monthly Average Weekly Average Monthly Average Weekly Average IMAX	Existing Technology limit (Chapter 92a.47). Application data: 27.0 mg/l max and 4.22 mg/l average (119 samples).
pH	6.0 – 9.0 SU	**Inst.** Min - IMAX	Existing Technology limit (Chapter 92a.47) Application data: **5.63** – 6.86 SU (980 samples). See also Compliance Section.
Dissolved Oxygen (DO) (effective in 3 years, with interim monitoring)	**3.0**	**Inst. Minimum**	**New permit limit based on water quality modeling and normal treated sewage DO concentration. As there is no known DO stream impairment and no POTW construction changes, the Chapter 93.7 Natural Salmonid Reproduction limits were not modeled.** No Application data.
Total Dissolved Solids (TDS)	**Report Lb/d** **Report Lb/d** **1000.0** **2000.0** **2500.0**	**Monthly average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**DRBC Limit being incorporated with standard multipliers (replacing previous monitoring requirement).** Application data: 294 mg/l max and 246 mg/l average (10 samples)
Chlorides, Bromide, Sulfate	-	-	Not required per Reasonable Potential Analysis. Application data: 35.0 mg/l Chloride; <0.2 mg/l Bromide; and 30.1 mg/l Sulfate (1 sample)
BOD5 Minimum Reduction	**85%**	**Minimum Monthly Average**	**Existing Part A narrative TBEL limit now added to reporting requirements. DRBC Docket incorrectly assumed the requirement was for CBOD5, but that was not specified in previous NPDES Permit.**
TSS Minimum Reduction	**85%**	**Minimum Monthly Average**	**Existing Part A narrative TBEL limit now added to reporting requirements.**
Fecal Coliform (5/1 – 9/30)	200/100 ml 1,000/100 ml	Geo Mean IMAX	Existing Technology limit (Chapter 92a.47)

			Application data of max of **13000/100 ml** and average of 95.9/100 ml (118 samples). See Compliance Section.
Fecal Coliform (10/1 – 4/30)	2,000/100 ml 10,000 ml/100 ml	Geo Mean IMAX	See above.
Total Residual Chlorine (TRC)	0.5**0** 1.17	Monthly Average IMAX	**UV disinfection is approved method of disinfection.** Existing Part C Chlorine Minimization TRC limits being added to Part A to allow reporting if used in a manner that it would appear in effluent. **Significant digit added.** No application data.
Ammonia-Nitrogen (May 1 - Oct 31) **Interim – First 3 years**	80.5 Lbs/d **Report Lbs/d** 17.5 **35.0** 35.0	Monthly Average **Daily Max** Monthly Average **Daily Max** IMAX	Existing Ammonia-N limits. **The existing IMAX is 35.0 mg/l, so the daily max cannot exceed 35.0 mg/l.** Application data: **41 mg/l max** and average of 7.90 mg/l (120 samples). See EDMR data also.
Ammonia-Nitrogen (May 1 - Oct 31) Final – Effective in 4th year	**53.2 Lbs/d** **Report Lbs/d** **11.6** **23.2** **29.0**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**Revised Ammonia-N limits per updated water quality modeling.**
Ammonia-Nitrogen (Nov 1 - Apr 30)	Report Lbs/d **Report Lbs/d** Report **Report** Report	Monthly Average **Daily Max** Monthly Average **Daily Max** IMAX	See above.
Total Phosphorus	Report Lbs/d **Report Lbs/d** Report **Report**	**Quarterly** Average **Daily Max** **Quarterly** Average **Daily Max**	Existing reporting requirement. Application data was 8.57 mg/l max and 4.17 mg/l average (8 sample).
Total Nitrogen (Nitrate-Nitrite-N + TKN measured in same sample)	Report Lbs/d **Report Lbs/d** Report **Report**	**Quarterly** Average **Daily Max** **Quarterly** Average **Daily Max**	Existing reporting requirement. Application data: TN: 31.5 mg/l max and 12.0 mg/l average (8 sample). TKN: 29.8 mg/l max and 9.44 mg/l average (8 samples) Nitrate-Nitrite: 3.60 mg/l max and 2.68 mg/l average (8 samples)
Aluminum (AMD TMDL metals)	**Report Lb/d** **Report Lb/d** **0.750** **1.500** **1.875**	**Monthly average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**Permit limits required due to BRADS leachate contribution with potential pass-through to AMD-impaired stream, with no facility TMDL WLAs.** Available BRADS Leachate Data (max): 0.414 mg/l (max) Total Aluminum at daily receiving flows equivalent to ~33% of ADF flow. Application data: 0.107 max, 0.061 mg/l average (5 samples)
Manganese (AMD TMDL metals)	**Report Lb/d** **Report Lb/d** **1.000**	**Monthly average** **Daily Max** **Monthly Average**	**Permit limits required due to BRADS leachate contribution with potential pass-**

	2.000 **2.500**	**Daily Max** **IMAX**	**through to AMD-impaired stream, with no facility TMDL WLAs.** Available BRADS Leachate Data (max): **11.2 mg/l** Total Manganese. Application data: 0.092 mg/l max, 0.052 mg/l average (6 samples)
Total Iron **(AMD TMDL metals)**	**Report Lb/d** **Report Lb/d** **1.500** **3.000** **3.750**	**Monthly average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**Permit limits required due to BRADS leachate contribution with potential pass-through to AMD-impaired stream, with no facility TMDL WLAs.** Available BRADS Leachate Data (max): **14.2 mg/l (max) Total Iron** at daily receiving flows equivalent to ~33% of ADF flow. Application data: 0.150 mg/l max, 0.095 mg/l average (6 samples)
Cadmium **(effective in 3 years, with interim monitoring)**	**0.005 Lbs/d** **0.008 Lbs/d** **1.13 ug/l** **1.76 ug/l** **2.82 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New limit required per Reasonable Potential Analysis.** Application Data: <0.001 mg/l max, <0.001 mg/l average (12 samples BRADS leachate). Insensitive ND levels. DEP Target QL is 0.2 ug/l. Available BRADS Leachate Data max: < 1 ug/l (max). Insensitive ND concentration.
Copper **(effective in 3 years, with interim monitoring)**	**0.12 Lbs/d** **0.16 Lbs/d** **25.8 ug/l** **34.8 ug/l** **64.6 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New limit required per Reasonable Potential Analysis. Application indicated copper is naturally occurring, and might be coming from drinking water or water service lines.** Application Data: 0.026 mg/l max, 0.017 mg/l average (12 samples) Available BRADS Leachate Data max: **92.7 ug/l** Total Copper at daily receiving flows equivalent to ~33% of ADF flow.
Silver **(effective in 3 years, with interim monitoring)**	**0.033 Lb/d** **0.052 Lb/d** **7.2 ug/l** **11.2 ug/l** **18.0 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New limit required per Reasonable Potential Analysis.** Application Data: <0.005 mg/l max, <0.005 mg/l average (12 samples). Insensitive ND level (0.4 ug/l DEP Target QL) Available BRADS Leachate Data: <5 ug/l max
Lead	**Report Lbs/d** **Report Lbs/d** **Report ug/l** **Report ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max**	**Monitoring required per Reasonable Potential Analysis** Application Data: 0.0014 mg/l max, 0.0011 mg/l average (12 samples) Available BRADS Leachate Data: 1.29 ug/l max
Zinc **(effective in 3 years, with interim monitoring)**	**1.28 Lbs/d** **2.0 Lbs/d** **280.0 ug/l** **437.0 ug/l** **700.0 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**Permit limits required per Reasonable Potential Analysis and potential BRADS leachate spiking.**

			Application Data: <0.1 mg/l max (1 sample), DEP Target QL of 5 ug/l. Concentration triggers permit limit requirements. Available BRADS Leachate Data: 0.267 mg/l Total Zinc (max) at daily receiving flows equivalent to ~33% of ADF flow.
Bis(2-Ethylhexyl) Phthalate	**Report Lbs/d Report Lbs/d Report ug/l Report ug/l**	**Monthly Average Daily Max Monthly Average Daily Max**	**Monitoring required per Reasonable Potential Analysis. Application attributed this constituents to plastics/PVC piping. No additional sampling done.** Application data: 11.4 ug/l (1 sample), DEP Target QL of 5 ug/l. Available BRADS Leachate Data: <3.1 ug/l
Toxaphene (effective in 3 years, with interim monitoring)	**0.000005 Lbs/d 0.000007 Lbs/d 0.001 ug/l 0.002 ug/l 0.002 ug/l**	**Monthly Average Daily Max Monthly Average Daily Max IMAX**	**New limit required by Reasonable Potential Analysis. WQBELs below Quantitation Limits Condition (0.5 ug/l).** Available BRADS Leachate Data: <2.6 ug/l (1 sample) Application data: ND (0.001 to 0.010 ug/l). Insensitive ND with DEP Target QL at 0.5 ug/l).
3,3-Dichlorobenzidene (effective in 3 years, with interim monitoring)	**0.003 Lb/d 0.004 Lb/d 0.55 0.86 1.38**	**Monthly Average Daily Max Monthly Average Daily Max IMAX**	**New limit required by Reasonable Potential Analysis. WQBELs below Quantitation Limits Condition (5.0 ug/l).** Available BRADS Leachate Data: <2.6 ug/l (1 sample) Application data: ND (0.001 to 0.010 ug/l). Insensitive ND with DEP Target QL at 0.5 ug/l).

Comments:

- Monitoring Updates: Frequencies updated to standard frequencies for this size of STP.
  - 24-hour composite sampling now required to eliminate potential 8-hour composite sampling biasing (and inaccurate reporting).
  - Updated units per EDMR requirements (IMIN/IMAX for grab sampling; fecal coliform #/100 ml; monthly monitoring for TDS due to DRBC monthly average limit; quarterly average reporting with daily max for all quarterly monitoring)
  - Additional Daily Max Reporting (not sampling) for parameters
- DRBC Limits (Chapter 92a.12): The DRBC Docket D-2012-029 CP-2 included 85% minimum CBOD5 monthly average reduction requirement (as an "existing DEP NPDES Permit requirement") and 1000 mg/l TDS monthly average WQBEL (monitored quarterly at minimum).
  - Minimum Monthly Average Reduction: The existing NPDES permit requirement was 85% reduction of either BOD5 or CBOD5 (not further specified in Part A.I Additional Requirements Item 2). BOD5 influent monitoring was required in the permit (plus separate Chapter 94 Reporting requirements). The Department accepts an effluent correlation of 1.2 BOD5/CBOD5 in the absence of other information. Therefore, the 85% BOD5 minimum monthly average reduction is being specified in this permit to avoid redundant and unnecessary burdens on the permittee.
  - TDS: The DRBC docket requires quarterly monitoring, but EDMR requires monthly monitoring for enforceable monthly average limits.
- Ammonia-N and DO Limits: Updated water quality modeling (see below for WQM Model 7.0 output) showed new limits are needed to protect the waters of the Commonwealth.

- Ammonia-N: The modeling is based on the existing Ammonia-N WQS. Pending WQS changes might make the future limit more stringent in the future, but the new WQS is pending EPA approval prior to coming into effect.
- DO: The Natural Trout (Salmonid) Reproduction DO non-summer limits have not been applied in the absence of known DO stream issues and no POTW upgrades. It is recommended that any plant upgrade consider post-aeration requirements in event that more stringent non-summer DO limits are imposed in the future.

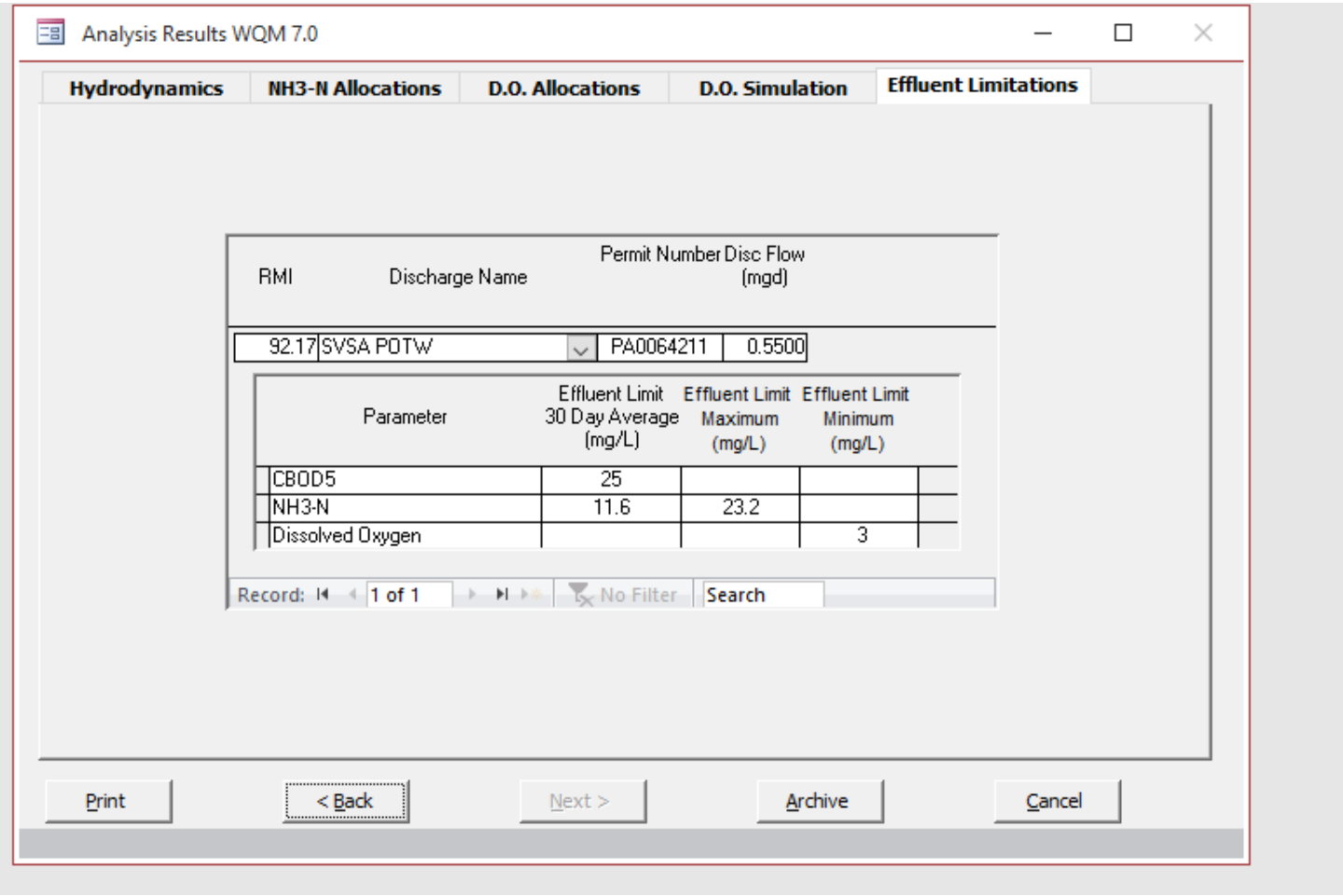
Reasonable Potential Analysis: See Toxic Management Spreadsheet Outputs and TOXCONC Outputs for Copper LTAMEC and COV below. In addition:

- TMDL Considerations (Aluminum, Manganese, and Total Iron): The facility has no Waste Load Allocations (WLAs) for AMD metals in the 3/28/2007 Upper Schuylkill River TMDL. The BRADS leachate has significant AMD metal loadings (with the BRADS Individual IW NPDES Permit including criteria-based permit limits). Therefore, new TMDL WQS-based effluent limits for Aluminum, Manganese, and Total Iron have been added to this permit to prevent contributing to the AMD-caused stream impairment. The TMDL-based limits are more stringent that water quality modeling limits that would have applied in the absence of the AMD-impairment.
- Copper: The Reasonable Potential Analysis (incorporating LTAMEC and COV from TOXCONC) showed permit limits are needed.
- Bis(2-Ethylhexyl) Phthalate: The application data detected this constituent at a concentration triggering monitoring. SVSA declined to do any additional sampling.
- New Limits Due to EPA Sufficiently Sensitive Rule Requirements: The EPA Sufficiently Sensitive Rule requires the Department to treat any insensitive ND concentration (not meeting DEP Target QLs) as the constituent being present at the insensitive ND concentration. Please note that due to limited BRADS leachate data (slug spiking potential), the Department would only modify the requirement to monitoring upon request if the constituents were determined to be non-detect at the DEP Target QLs:
  - New Limits (from 12-week Study that mandated using DEP Target QLs): Many analyses failed to meet DEP Target QLs:
    - Cadmium: ND at 0.001 mg/l. DEP Target QL at 0.0002 mg/l (0.2 ug/l).
    - Silver: ND at 0.005 mg/l. DEP Target QL at 0.0004 mg/l (0.4 ug/l)
    - 3,3-Dichlorobenzidine: ND level from 0.001 – 0.010 mg/l. DEP Target QL at 0.005 mg/l (5 ug/l).
    - Toxaphene: ND level from 0.001 – 0.010 mg/l. DEP Target QL at 0.0005 mg/l (0.5 ug/l).
  - New Monitoring Requirements: The insensitive Zinc ND (<0.1 mg/l) triggered monitoring requirements. Monitoring is also appropriate due to limited BRADS leachate data.
- **BRADS Leachate Issues & Additional Monitoring Requirements: No other industrial or commercial contributions per application BRADS Landfill C&D landfill leachate.** The Reasonable Potential Analysis has been complicated by BRADS leachate-related issues, partly due to incomplete BRADS Landfill NPDES Permit-required Quarterly Untreated Leachate Monitoring Reports. To date (January 6, 2021), BRADS Landfill has only completed the Third Quarter 2020 Untreated Leachate Monitoring Report (Individual IW NPDES Permit site-specific form) adequately. Other BRADS Quarterly Reports omitted the majority of the NPDES Priority Pollutants that were not addressed under the DEP Waste Management Program Module 50 or the SVSA-supplied leachate sampling data (except for one initial sampling event). BRADS is also proposing to connect to the SVSA collection system/POTW and terminate its own Individual IW NPDES Permit (i.e. the Quarterly Untreated Leachate Monitoring Report requirement would also terminate in that event). SVSA only conducted one Pollutant Groups sampling analysis. This limited data set and inherent leachate variability (depending on what has been disposed, precipitation, etc.) means that the BRADS Leachate is not fully characterized. The 2019 receipt of BRADS leachate at 34% of the 2019 SVSA ADF Flow means the POTW might not be able to handle spiking of leachate constituents (especially Total Iron and Manganese). The SVSA-issued IU permit does not monitor the majority of the NPDES Priority Pollutants and did not impose SVSA IU permit limits for assorted metals (not even the BRADS/SVSA Leachate Agreement's 5 mg/l Total Iron limit). SVSA IU Monthly and Quarterly monitoring might also not catch spiking events. The SVSA sampling methodology is also unclear.
  - **Additional monitoring requirements have been added to the permit to address the above concerns**:
    - **Part C.I.G:** The Department is reserving the right to require Pollutant Groups 1 through 7 analysis within 60 days of Department request. This might be required in event that a cause for a pass-through or interference event or negative stream impact could not be determined. It might also be required in event separate BRADS Landfill NPDES Permit-required Quarterly Untreated Leachate Monitoring Reports indicated spiking of other constituents.

- **Outfall No. 001 Monitoring:** Outfall No. 001 monitoring of selected constituents during dates of BRADS wastewater receipt. In addition, the Department would require monitoring upon request for Cadmium, Silver, 3,3-Dichlorobenzidine, and Toxaphene even if additional sampling showed them non-detect at the DEP Target QLs.
- **Outfall/Internal Monitoring Point 101 (Headworks Sampling):** The Department is reserving the right request for Total Iron and Manganese influent headworks sampling for when BRADS Landfill ties into the POTW or in event of significant AMD-impacted Inflow & Infiltration into the SVSA collection system.
- **Outfall/Internal Monitoring Point No. 102 (Hauled-in Wastewater monitoring):** In addition to SVSA commitments for Flow & Specific Conductance measurement & BOD5/TSS monitoring, the Department is reserving the right to require monitoring upon request for assorted BRADS leachate constituents of interest.

- Applicable Standard NPDES Permit Conditions: SVSA, including its IPP Program, are also subject to the following standard NPDES Permit conditions that will help prevent any impacts on the waters of the Commonwealth:
  - Part A.I:
    - Monitoring/limits for the TMDL AMD constituents (Aluminum, Manganese, and Total Iron) due to potential for pass-through impact on the AMD-impaired receiving stream (Outfall No. 001 and IMP/Outfalls Nos. 101 and 102.
    - Part A.I Additional Requirements Item 1 includes narrative Technology-Based Effluent Limits in event of color or other visible stream change.
  - Part A.II: Definitions for “industrial user” and “indirect discharger”. See “Residual Waste” definition as it pertains to hauled-in leachate.
  - Part A.III.A: Representative sampling and analysis requirements pertain to any POTW influent and/or pretreatment program.
  - Part A.III.B.7: If SVSA does additional sampling, reporting in the DMRs is required.
  - Part A.III.C.2: This condition would apply in event of substantial change in incoming wastestream quantity and/or new BRADS wastewater streams.
  - Part B.I.C.3: If SVSA discovered its application information did not correctly characterize BRADS waste streams, this condition requires notification of the Department.
  - Part B.I.C.4.b and c: Annual reporting requirements (hauled-in wastes reporting requirements). Landfills do not have pretreatment ELGs but information on leachate quality would be helpful in the Chapter 94 Reports.
  - Part B.I.D.3: Pretreatment requirements (including potential need for local limits) to prevent interference (with the POTW treatment process) and/or pass-through (to effluent discharge to the stream).

WQM Model 7.0 Output:



TOXCONC Output: Where data was all ND below the identified quantitation, no meaningful result as witnessed by silver and cadmium results:

		Reviewer/Permit Engineer:	James Berger
Facility:	Schuylkill Valley Sewer Authority		
NPDES #:	PA0064211		
Outfall No:	001		
n (Samples/Month):	4		
Parameter	**Distribution Applied**	**Coefficient of Variation (daily)**	**Avg. Monthly**
Copper (mg/L)	Lognormal	0.2930662	0.0233117
Lead (mg/l)	Delta-Lognormal	0.2393381	0.0014339
Silver (mg/L)	Delta-Lognormal	#DIV/0!	#DIV/0!
Cadmium (mg/L)	Delta-Lognormal	#DIV/0!	#DIV/0!

Model Run 1: This model run used application data only:

☑ ***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 Cadmium	0.005	0.008	1.13	1.76	2.82	µg/L	1.13	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Copper	0.12	0.16	25.8	34.8	64.6	µg/L	25.8	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Lead	Report	Report	Report	Report	Report	µg/L	11.7	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Silver	0.033	0.052	7.2	11.2	18.0	µg/L	7.2	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	280	AFC	Discharge Conc > 10% WQBEL (no RP)
Bis(2-Ethylhexyl)Phthalate	Report	Report	Report	Report	Report	µg/L	31.6	CRL	Discharge Conc > 25% WQBEL (no RP)
3,3-Dichlorobenzidine	0.003	0.004	0.55	0.86	1.38	µg/L	0.55	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Toxaphene	0.000005	0.000007	0.001	0.002	0.002	µg/L	0.001	CFC	Discharge Conc ≥ 50% WQBEL (RP)

Model Run 2: This model run incorporated (limited) BRAD Leachate Max data for Aluminum (414 ug/l), Total Iron (14,200 ug/l), Manganese (11,200 ug/l), and Zinc (267 ug/l)to see what limits would result from spiking (discounting dilution and any applicable facility removal efficiency) in case the limit would become more stringent. TMDL WQS-based limits will supersede the AMD metal limits (Aluminum, Total Iron, and Manganese).

☑ ***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 Aluminum	Report	Report	Report	Report	Report	µg/L	1,266	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Cadmium	0.005	0.008	1.13	1.76	2.82	µg/L	1.13	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Copper	0.12	0.16	25.8	34.8	64.6	µg/L	25.8	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Iron	12.9	20.1	2,811	4,385	7,026	µg/L	2,811	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Lead	Report	Report	Report	Report	Report	µg/L	11.7	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Manganese	7.88	12.3	1,719	2,682	4,297	µg/L	1,719	THH	Discharge Conc ≥ 50% WQBEL (RP)
Total Silver	0.033	0.052	7.2	11.2	18.0	µg/L	7.2	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	1.28	2.0	280	437	700	µg/L	280	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Bis(2-Ethylhexyl)Phthalate	Report	Report	Report	Report	Report	µg/L	31.6	CRL	Discharge Conc > 25% WQBEL (no RP)
3,3-Dichlorobenzidine	0.003	0.004	0.55	0.86	1.38	µg/L	0.55	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Toxaphene	0.000005	0.000007	0.001	0.002	0.002	µg/L	0.001	CFC	Discharge Conc ≥ 50% WQBEL (RP)

Development of Effluent Limitations

Outfall No. 101 (IMP) **Design Flow (MGD)** NA

Latitude 40º 42' 30.00" (based on Outfall No. 001) **Longitude** -76º 8' 48.00" (based No.001)

Wastewater Description: Raw sewage influent (at headworks)

Permit Limits & Monitoring: Changed bolded.

Parameter	Limit (mg/l unless otherwise specified)	SBC	Model/Basis
Flow	**Report (MGD)** **Report (MGD)**	**Monthly Average** **Daily Max**	**Flow needed for flow-proportional composite sampling and to calculate mass loadings.**
BOD5	Report (lb/d) Report (lb/d) Report Report	Monthly Average Daily Max Monthly Average Daily Max	Needed to calculate POTW Monthly Minimum Average Reduction and Chapter 94 Reporting requirements
TSS	Report (lb/d) Report (lb/d) Report Report	Monthly Average Daily Max Monthly Average Daily Max	Needed to calculate POTW Monthly Minimum Average Reduction
Total Iron	**Report (lb/d)** **Report (lb/d)** **Report** **Report**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max**	**Monitoring per request only, due to future BRADS connection to SVSA collection system and POTW.**
Manganese	**Report (lb/d)** **Report (lb/d)** **Report** **Report**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max**	**See above.**

Comments: This Internal Monitoring Point (at SVSA headworks) has been created to address previous monitoring requirements under Outfall No. 001. Monitoring is monthly at minimum due to Monthly Minimum Reduction Limits (BOD5 and TSS) and Chapter 94 requirements.

Development of Effluent Limitations

Outfall No. 102 (IMP) **Design Flow (MGD)** NA

Latitude 40º 42' 30.00" (based on Outfall No. 001) **Longitude** -76º 8' 48.00" (based No.001)

Wastewater Description: Raw industrial influent (hauled-in BRADS wastewater going to SBR Prereact Tanks)

Permit Limits & Monitoring: All are new permit requirements

Parameter	Limit (mg/l unless otherwise specified)	SBC	Model/Basis
Flow	Report (MGD) Report (MGD)	Monthly Average Daily Max	SVSA committed to reporting flows and flows are needed to calculate minimum monthly average reductions.
pH	Report – Report SU	Inst. Min - IMAX	Reasonable potential for low pH BRADS leachate or other wastewater (using AMD-impacted groundwater source).
Specific Conductance	Report (µmhos/cm) Report (µmhos/cm)	Monthly Average Daily Max	SVSA committed to reporting specific conductance (as a surrogate for TDS)
BOD5	Report (lb/d) Report (lb/d) Report Report	Monthly Average Daily Max Monthly Average Daily Max	Needed to calculate POTW Monthly Minimum Average Reduction
TSS	Report (lb/d) Report (lb/d) Report Report	Monthly Average Daily Max Monthly Average Daily Max	Needed to calculate POTW Monthly Minimum Average Reduction
Aluminum	Report (lb/d) Report (lb/d) Report Report	Monthly Average Daily Max Monthly Average Daily Max	Monitoring upon request for constituent subject to SVSA Effluent Limit and potential for spiking.
Manganese	Report (lb/d) Report (lb/d) Report Report	Monthly Average Daily Max Monthly Average Daily Max	Monitoring upon request for constituent subject to SVSA Effluent Limit and potential for spiking.
Total Iron	Report (lb/d) Report (lb/d) Report Report	Monthly Average Daily Max Monthly Average Daily Max	Monitoring upon request for constituent subject to SVSA Effluent Limit and potential for spiking.
Cadmium	Report (lb/d) Report (lb/d) Report Report	Monthly Average Daily Max Monthly Average Daily Max	Monitoring upon request for constituent subject to SVSA Effluent Limit and potential for spiking.
Copper	Report (lb/d) Report (lb/d) Report Report	Monthly Average Daily Max Monthly Average Daily Max	Monitoring upon request for constituent subject to SVSA Effluent Limit and potential for spiking.
Silver	Report (lb/d) Report (lb/d) Report Report	Monthly Average Daily Max Monthly Average Daily Max	Monitoring upon request for constituent subject to SVSA Effluent Limit and potential for spiking.
Lead	Report (lb/d) Report (lb/d) Report	Monthly Average Daily Max Monthly Average	Monitoring upon request for constituent subject to SVSA Effluent monitoring requirement and potential for spiking.

	Report	Daily Max	
Zinc	Report (lb/d) Report (lb/d) Report Report	Monthly Average Daily Max Monthly Average Daily Max	Monitoring upon request for constituent subject to SVSA Effluent Limit and potential for spiking.
Bis(2-Ethylhexyl) Phthalate	Report (lb/d) Report (lb/d) Report Report	Monthly Average Daily Max Monthly Average Daily Max	Monitoring upon request for constituent subject to SVSA Effluent monitoring requirement and potential for spiking.
Toxaphene	Report (lb/d) Report (lb/d) Report Report	Monthly Average Daily Max Monthly Average Daily Max	Monitoring upon request for constituent subject to SVSA Effluent Limit and potential for spiking.
Total PCBs	Report (lb/d) Report (lb/d) Report Report	Monthly Average Daily Max Monthly Average Daily Max	Monitoring upon request for constituent subject to Schuylkill River TMDL (PCBs) in case someone sends contaminated C&D waste to BRADS landfill, resulting in PCBs in the leachate.

Comments:

- This internal monitoring point is for hauled-in raw industrial influent (BRADS leachate, BRADS Tire Washwater, and BRADS site-generated sanitary wastewater) being accepted by SVSA at the SBR Tanks (not subject to SVSA headworks sampling). Any other hauled-in wastewater would be subject to NPDES Permit Part A.III.C.2 (Planned Changes in Waste Stream) as influent monitoring requirements might change if additional wastewaters or wastewater types are received at this location. If SVSA start hauling-in additional wastewaters, the Department reserves the right to require additional sampling for the constituents monitored upon request.
- Monitoring is upon days of receipt of hauled-in wastewater. If no wastewater is received at this IMP during the mont, then “no discharge” DMR reporting is required.
- pH monitoring is grab sampling (as it is assumed pH will not vary much truck to truck hauling wastewater from BRADS leachate tank).
- Specific Conductance daily max would be the highest truck load measurement or grab-composite sample reading. Methodology should be clearly stated in the reporting DMR.
- Other sampling is grab-composite (from multiple trucks or single truck as the Department directs).

Communication Log:

12/12/2017: Contacted technical consultant (Jamie Lorah, SSM Engineer, 610-898-3044) on 12/12/2017 to discuss the following incompleteness questions: She said that they would get back to me by the following week, and maybe sooner. Verbal feedback in bold. Issues discussed included:

- GIF Site Information Section: Any address number for WWTP? **316**
- NPDES Application Form:
    - Tributary Information: Must add up to 100%, so numbers are wrong (misunderstood question)
    - Topo and Discharge Information: **They are sure outfall is located within Blythe Township, not East Norwegian**.
    - Effluent data (>0.100 MGD): Any DO (Natural Trout Reproduction stream) or O&G (narrative limit) data available? What caused the fecal coliform IMAX exceedances? **Consultant thinks exceedance might be lab problem, and will check to see if permittee explained cause to DEP M&C for any follow-up.**

1/9/2020: Technical Deficiency Letter issued with courtesy e-mail copy sent.
1/9/2020: SVSA (SSM) E-mail asking for withdrawal of letter due to previous Department approval of acceptance of BRADS leachate.
1/10/2020: DEP (Berger) E-mail explaining letter was NPDES Permit Renewal Application technical deficiency letter addressing application issues.
1/16/2020: SVSA (SSM) E-mail asking for holds on both DRBC Docket and NPDES Permit due to SVSA changes and uncertainty if SVSA would accept BRADS leachate.
1/30/2020: SVSA (SSM) E-mail request for more time to respond, and providing some informational feedback. SVSA will accept BRADS leachate.
1/31/2020: DEP (Berger) E-mail granting extension to 3/31/2020, providing requested interim hauled-in RSW/MSW forms for SVSA use until new permit.
3/31/2020: Response to DEP Technical Deficiency Letter received. **NOTE**: Sent in with Chapter 94 Report, and not forwarded to the reviewer. No narrative response to 1/9/2020 DEP letter comments found in submittal.
6/11/2020: DEP (Berger) E-mail asking for application (not yet received by this reviewer)
6/11/2020: Authority E-mail with courtesy copy of missing response. **NOTE**: Application response was later found attached to the 2019 Chapter 94 Report.
11/13/2020: DEP (Berger) E-mail asking for additional application information. Response due by 12/1/2020.
11/16/2020: DEP (Berger) E-mail asking for updated site contact information from consultant (as MS marked 11/13/2020 E-mail as undeliverable) in terms of either GIF site contact information or corrected e-mail address.
11/16/2020: Authority (Lorah) E-mail updating names of Authority Chairman (Charles Hoslers) and Site contacts (Dean Miller and Deb Balsavage of Miller Environmental).
11/25/2020: Authority request for extension to respond to 11/13/2020 DEP E-mail questions.
11/30/2020: DEP E-mail granting requested extension to 12/8/2020.
12/7/2020: SVSA response to 11/13/2020 DEP E-mail (application update)