Pennsylvania Department of Environmental Protection

Northeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0065307**
Facility Type	**Industrial**	APS ID	**739609**
Major / Minor	**Minor**	Authorization ID	**1138452**

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

Applicant and Facility Information

Applicant Name	**Commonwealth Environmental Systems LP (CES)**	Facility Name	**Commonwealth Environmental Systems (CES) Landfill**
Applicant Address	249 Dunham Drive	Facility Address	99 Commonwealth Road
	Dunmore, PA 18512-2686		Hegins, PA 17938
Applicant Contact	Dominick DeNaples (Assistant Site Mgr.)	Facility Contact	Michael Piepoli (Site Mgr.)
Applicant Phone	(570) 343-5782	Facility Phone	(570) 695-3590
Client ID	92580	Site ID	518936
SIC Code	4953	Municipality	Foster, Reilly & Frailey Townships
SIC Description	Trans. & Utilities - Refuse Systems	County	Schuylkill
Date Published in PA Bulletin	November 26, 2016; Redraft TBD	EPA Waived?	No
Comment Period End Date	Extended; Redraft TBD	If No, Reason	DEP Discretion (TMDL issues)

Purpose of Application: Application for a renewal of an NPDES permit for discharge of treated Industrial Wastewater.

Summary of Review

This is a **Fact Sheet Addendum for a 0.090 MGD Individual IW (minor with ELG) Bay Redraft NPDES Permit Renewal** for the **Commonwealth Environmental System (CES) MSW Landfill** for the discharge of:

- Treated landfill wastewaters (including leachate) & treated site-generated sanitary wastewater to Middle Creek (CWF, MF) via IW Outfall No. 001.
- Site-generated stormwater to Middle Creek (CWF, MF), Swatara Creek (CWF, MF; Impaired), and Gebhard Creek (CWF, MF) via Outfalls Nos. 002 through 009 (with former "stormwater Outfall No. 001 redesignated Outfall No. 006).
- Approved on-site use(s) of Class A Reclaimed Water (fully-treated wastewater compliant with NPDES permit limits and monitoring requirements) outside of secondary containment (dust control; mud/sediment cleaning at landfill entrances; irrigation of landfill cover vegetation; use in truck/tire wash; etc.) within the MSW Landfill Permit No. 101615 permit boundary within the Middle Creek (CWF, MF), Swatara Creek (CWF, MF; impaired), and Gebhard Creek (CWF, MF) watersheds. Gebhart Run (a.k.a. Coal Run downstream) flows into Middle Creek, which flows into Swatara Creek.
    - The Reclaimed Water usages are restricted so that there is no discharge to surface waters (by runoff due to excessive application) and/or to groundwater (via discharge to oversaturated soils/subgrade). This allows for relaxation of several IW Outfall No. 001 treated effluent permit limits such as temperature, DO, Free Cyanide, Ammonia-N per DEP Reuse policy, etc. Land application (use of soils/subgrade materials to further treat the effluent) is not authorized by this permit and/or WQM Permit No. 5411403
    - The facility monitoring has been expanded to include MSW Landfill groundwater and surface monitoring points in addition to IW Stormwater Outfalls to address any long-term impacts on surface/ground waters.
    - The facility has not been discharging to either Middle Creek (via IW Outfall No. 001) or the local POTW (via sewer system) per the Application and indicates that it might be able to use all future site-generated fully

Approve	Deny	Signatures	Date
X		James D. Berger (signed) James D. Berger, P.E. / Environmental Engineer	October 3, 2025
X		Edward Dudick, P.E. / Environmental Engineer Manager	October 27, 2025

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treated wastewater onsite. See Compliance Section below for apparent unauthorized discharges of unknown-quality treated effluent (not used as Reclaimed Water) to an IW Stormwater-only Outfall & wrong stream, and without required IW Effluent monitoring/reporting. Additional monitoring & reporting requirements have been added to the permit to clarify what wastewater is discharged, reused, or disposed offsite.

Need for New Redraft NPDES Permit: The previous 2016 Draft NPDES Permit and application are now substantially outdated due to regulatory changes, NPDES permit template condition changes, site changes, need for clarification regarding usage of Reclaimed Water (fully-treated effluent) for onsite reuses, merger with IW Stormwater permitting requirements (formerly under the PAG-03 IW Stormwater General Permit), noted apparent compliance issues, etc.

- Updated IW NPDES Permit Application: The facility updated the old NPDES Permit application (as needed) via March 2025 DEP Technical Deficiency Letter.
  - Public Upload# **340722**) on 8/19/2025 (Updated Application missing analytical data and uncompleted Pollution Identification Section/Other Toxics Table)
  - Public Upload**# 348482** on 9/24/2025 (updated Pollutant Group Tables and stormwater sampling tables with lab sheets) received and additional analytical information. Missing:
    - The laboratory will provide a list of Tentatively Identified Compounds (TICs) from GC/MS scans. The applicable sections in the application will be completed using these data upon receipt of the analytical reports from the laboratory. CES will submit a supplement to the comment response and permit renewal package containing the completed sections for "Five Peaks" Pollutants and Other Potential Pollutants to PA DEP within two (2) weeks of receipt of the final round of analytical data, (anticipated submission date of September 12, 2025)
    - Uncompleted Application "Other Toxic Pollutants and Hazardous Substance Tables".
    - Stream Total Hardness item not completed.
- IW Stormwater Permitting: This NPDES permit incorporates IW Stormwater NPDES permitting requirements previously under the separate PAG-03 IW Stormwater General Permit No. PAR502208 (a.k.a. superseded PAG032298 under On-base# 101315**)**: The ICP indicates the Landfill's Stormwater retention/sedimentation basin/ponds Nos. 1 through 5 are sized with capacity to handle a 25-year/24-hour precipitation event. Basins are grass lined and with outlet structures protected with stone. Substantial updating was required due to updated IW Stormwater NPDES template language & requirements, substantial site changes since 2012, Reclaimed Water usage-related requirements, etc. Site changes include but not limited to:
  - Stormwater Outfall No. 001: The facility had two different Outfalls No. 001. One was the IW NPDES Permitted IW Outfall No. 001 discharging treated effluent to Middle Creek. The other was a "Stormwater Outfall No. 001" that was the Basin 1 discharge to Swatara Creek. The 2012 PAG-03 Notice of Intent (NOI) only addressed Basins 1 – 3 discharges, and was contradictory whether Outfall No. 001 discharged to Middle Creek or Swatara Creek. However, the PAG-03 could not authorize any wastewater (including fully treated wastewater otherwise used onsite as Reclaimed Water) discharge to the Stormwater Outfall No. 001 (discharging to Swatara Creek). Stormwater Outfall 001 is being redesignated Outfall 006 to avoid any future confusion.
  - New Stormwater Outfalls: Added new stormwater outfalls Nos. 004 (existing Basin 4 discharge) and 005 (existing Basin 5 discharge) per application (for post-2012 Basins) and additional outfalls Nos. 007 through 009 due to facility proposed Reclaimed Water usage at landfill entrances for dust/mud control.
  - CAP: 2023 Corrective Action Plan noted Basin 3 was enlarged due to related landfill expansion. This was indicated to have caused erosion, with the CAP including use of compost filter socks in the new grading/expansion area of Basin 3, installation of rock filter around existing riser pipe outlet structure, removal of sediment, and conducting sector-specific BMs for temporary seeding, mulching, and placement of textiles over stockpiles and inactive areas of the landfill.
- Future MSW Landfill major landfill "Southwestern Expansion" (with initial MSW landfill permit No. 101615 modification application submittal in 2024/2025 time-frame): This NPDES Permit is neutral to this proposed landfill expansion due to permittee-statements that there will not be substantial site changes (in terms of stormwater management) during the 5-year NPDES Permit term (other than some Pad/Cell 1 work mentioned).
  - Construction of cells for the Southwest Expansion is anticipated to begin in January of 2028. The only part of this planned expansion that may occur within the next five (5) years is Pad 1. Figure 4 – Pad 1 Development Plan, shows the materials balance, construction sequence schedule, and extent of Pad 1 with associated stormwater controls (but no apparent changes to existing basins/outfalls). General Information Form

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indicated: 0.56 acres to be disturbed during southeast expansion. will impact existing wetlands. CES will mitigate 0.33 acres and pay a fee to offset the balance.
  - The next NPDES Permit renewal will have to address proposed changes after the next 5-years. Application drawings show a planned Surface Water Monitoring Point 3 (Middle Creek) and new/modified stormwater basins. Drawings either renumbered or left basins unnumbered, adding to confusion over future proposed changes onsite but they are outside the scope of this permit action. If any changes are proposed within the 5-year NPDES Permit term, the Part A.III.C.2 and Part C.VII requirements would pertain. At that time, the Department would determine what NPDES/WQM permitting might be required.
- This is a now an EPA Discretionary Permit due to TMDL issues (in addition to being an IW NPDES Permit). The facility discharges to streams under watershed TMDLs (Chesapeake Bay and AMD metals).
  - The existing mass loading Chesapeake Bay limits are zero lbs/year net. There is evidence of unaccounted-for TN/TP mass loadings due to unauthorized discharges of treated effluent via a Basin 1 "stormwater Outfall No. 001" (being redesignated Outfall No. 006) to Swatara Creek as discussed in the Compliance Section. No IW Outfall No. 001 (Middle Creek) monitoring/reporting was done to allow for purchasing nutrient credits.
  - The "stormwater Outfall No. 001" (being redesignated Outfall No. 006) Basin 1 outlet discharge (upstream of AMD seepage along channel route to Swatara Creek) has had consistent high Total Iron concentrations that contribute to AMD metal impairment in Swatara Creek. Such loadings should not be coming from landfill stormwater/sedimentation basins. The unauthorized discharge of Treated Effluent flow to Basin 1 would also convert any intermittent stormwater discharge into a more continuous discharge with greater impact on the receiving stream. See Effluent Section for IW Stormwater EDMR & Application information for iron loadings. **NOTE**: If AMD seepage is entering the Basin and discharging through its outlet, that would require converting the IW Stormwater Outfall into an IW Outfall with permit limits (until seepage is eliminated from basin).

Changes from Previous 2016 Draft NPDES Permit:

- **General:**
  - **Standard Part A, B, and C Conditions**: Updated NPDES standard Template conditions (Parts A, B, and C) incorporated.
  - **New IW Stormwater Requirements**: This permit has incorporated IW Stormwater permitting requirements previously under the PAG-03 IW Stormwater General Permit No. PAR502208 minimum statewide requirements. Additional site-specific requirements under this IW NPDES Permit apply due to site-specific issues including but not limited to: previously unaccounted for stormwater-only outfalls; quarterly monitoring requirements due to Reclaimed Water usage outside of secondary containment; Chapter 95.2 limits for Iron; TMDL-related issues; etc.).
  - **New Reclaimed Water Reuses**: This permit authorizes additional reuses of Reclaimed Water (a.k.a. fully-treated wastewater) that meet the DEP Policy No. 385-2199-002 (Reuse of Treated Wastewater Guidance Manual) requirements for Class A Reclaimed Water (with greater potential public exposure from proposed additional usages) with increased monitoring requirements and new Class A limits for Reclaimed Water Usage onsite. Previous WQM Permitted usages were Class C (no significant public exposure).
  - **Former Stormwater Outfall No. 001 (to Swatara Creek) and Existing IW NPDES Permit IW Outfall No. 001 (to Middle Creek)**: The former "SW Outfall No. 001" (Basin 1 discharge to Swatara Creek) has been redesignated Outfall No. 006 because DEP policy/EDMR limitations do not allow for both being designated as "001" and due to previous permittee confusion over applicable permit requirements (per Compliance Section discussion).
- **Part A.I.A & A.I.B (IW Outfall No. 001) Interim/Final WQBELs:** Interim and Final WQBELs/monitoring requirements due to updated Reasonable Potential Analysis/water quality modeling. See Effluent Sections for details. See Part C.III (Schedule of Compliance: Ammonia-N), Part C.IV (WQBELs for Toxic Pollutants), and Part C.V (WQBELs below Quantitation Limits) for related requirements. Added footnote cross-reference to Part C.II.J (minimum fully-treated wastewater reuse) monitoring & reporting requirement due to facility practice of no discharges to either IW Outfall No. 001 or POTW, to ensure fully-treated effluent quality meets NPDES permit requirements (except for parameters that do not apply if there is no discharge to either surface waters or groundwater).
- **Part A.I.C (IW Outfall No. 001):**
  - Additional monitoring requirements per Reasonable Potential Analysis. See Effluent section for details.
  - PFAS monitoring per DEP PFAS Strategy (with standard footnote).
  - Flow-proportional 24-hour composite sampling is now required due to Chesapeake Bay nutrient trading requirements. See Part A.II definitions for composite sampling requirements.
  - Grab sampling limits clarified as Instantaneous Minimum and Instantaneous Maximum.

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- Significant digits added as needed.
- Additional reporting of mass loads and daily max concentrations added (not requiring additional sampling).
- Added rainfall monitoring (daily) monitoring & reporting due to Reclaimed Water usages limited by precipitation events.
- Added footnote requirement for EDMR reporting of monthly volume (gallons) of trucked landfill wastewater (RO Concentrate or other treated/untreated wastewaters) going to landfill working face for recirculation under the MSW Landfill permit and/or offsite disposal (due to references of such practices in application).
- Added footnote cross-reference to Part C.II.J (minimum fully-treated wastewater reuse) monitoring & reporting requirement due to facility practice of no discharges to either IW Outfall No. 001 or POTW, to ensure fully-treated effluent quality meets NPDES permit requirements (except for parameters that do not apply if there is no discharge to either surface waters or groundwater).

- **Parts A.I.D, E, F (Stormwater Outfall Nos. 002 (Sed Basin 2 discharge), 003 (Sed Basin 3 discharge), 004 (Sed Basin 4 discharge), 005 (Sed Basin 5 discharge), 006 (Sed Basin 1, discharge formerly SW 001), 007 (Commonwealth Road outfall, 008 (second access road entrance), 009 (third entrance from SR-25)**: Incorporation of former PAG-03 IW Stormwater General NPDES Permit No. PAR502208 Outfalls (Nos. 002, 003, and 004, plus additional existing basin outfalls per application and several landfill entrance outfalls for mud/sediment washing using Reclaimed Water). See Effluent Limits section for reason for parameters and incorporation of IW Stormwater Outfalls into the surface/groundwater monitoring system for Reclaimed water usage onsite. See Part C.VII for related stormwater permit conditions. See Part C.II.J for Reclaimed Water requirements.
- **Part A.I.G (IMP/Outfall 101)**: New raw Influent monitoring point at pump station to Raw Leachate Storage Tanks/IWTP for flow reporting and sampling for the DEP Clean Water Raw Leachate M&R sampling. This is the required monitoring point for the NPDES Raw Leachate Monitoring Report sampling & analysis (screening). No other influent location to the IWTP (Raw Influent Tanks through treatment process to Treated Effluent Tanks) is authorized by this permit. **NOTE**: Assorted MSW Landfill Permit Form 50 sampling points are at scattered locations that might not be representative of raw influent to IWTP).
- **Part A.I.H (IMP/Outfall No. 102) Treated Effluent Tank discharge to Reclaimed Water Usage or other non-IW Outfall No. 001 destinations**: This monitoring point has been created to allow for monitoring/reporting of Reclaimed water usage rates (average monthly, daily max) and Reclaimed Water compliance with Class A limits/monitoring requirements and site-specific considerations via EDMR. See Effluent Limits section for basis of conditions (Class A Reclaimed Water requirements due to greater potential public exposure; IW Stormwater General Permit PAG-03 minimum statewide requirements for landfill, oil & grease monitoring for fueling/parking area, site-specific treated effluent considerations). Monitoring point for all parameters except fecal coliforms at same location as IW Outfall No. 001. Fecal Coliform sampling location at Treated Effluent Tank discharge per WQM Permit and DEP Reuse policy.
- **Part C.II.C (Relation to WQM Permit)**: This standard IW NPDES permit was in the previous Draft NPDES Permit and supersedes the obsolete WQM permit Reuse effluent monitoring/requirements (based on Class C Reclaimed Water usages) due to changes in proposed Reclaimed water usages triggering Class A limits and other considerations.
- **Part C.II.E (WQM Permit Amendment Application)**: This condition requires submittal of a complete and technically adequate Water Quality Management (WQM) permit application to DEP within ninety (90) of Permit Effective Date to document as-built construction and to address all changes in the IWTP facility (including pump station, Raw Wastewater Tanks, Treatment Process (including solids management), Treated Wastewater Tanks, and any provisions for trucking RO Concentrate and treated/untreated wastewater) from that approved under the December 14, 2011 WQM Permit No. 5411403. The IWTP was previously modified by previous MSW Landfill permit amendments but no concurrent WQM permit amendment application received.
- **Part C.II.F (Osmotic Pressure definition)**: New condition due to Reasonable Potential and potential permittee confusion over what is being required in Part A reporting.
- **Part C.II.G (Operator-in-Responsible Charge)**: New condition due to apparent failure of permittee to understand and comply with previous existing NPDES/WQM permit requirements (see Compliance History for substantial noncompliance; failure to amend the NPDES/WQM permits despite substantial site changes; and additional odd application statements that indicated the permittee did not feel it necessary to amend the existing WQM Permit when they modified the IWTP in accordance with separate MSW Landfill permit amendments despite existing permit language or that the NPDES/WQM permits requirements do not overlap) and receipt of onsite-generated sanitary wastewater (in addition to solids wastes from treatment plants). This problem cannot be addressed unless someone onsite has the required understanding of the NPDES/WQM permit requirements and explicit responsibility/authority to take action and/or otherwise notify the Department of potential noncompliance.

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- **Part C.II.H (Groundwater and surface water (in addition to IW stormwater outfall) monitoring)**: New monitoring & reporting requirements due to usage of Reclaimed Water outside of secondary containment onsite, incorporating facility-proposed monitoring and existing/proposed MSW Landfill Permit monitoring points.
- **Part C.II.I (Waste Streams)**: New condition due to failure of permittee to address NPDES Permit application form requirements to define the landfill waste-streams types and expected pollutants (Pollutant Identification Section, Other Toxic Pollutants table, etc.), and inherent variability of landfill waste stream types/pollutants. New waste stream types (with different pollutant/concentrations) will trigger Part A.III.C.2 (Planned Changes in Waste Stream) notification requirements, etc.
- **Part C.II.J (Class A Reclaimed Water Reused Onsite within MSW Landfill No. 101615 permit boundary)**: This condition addresses uses of Class A Reclaimed Water (fully-treated effluent meeting NPDES permit requirements for discharge to Middle Creek except for parameters not required when there is no runoff to surface waters and/or discharge to groundwater via oversaturation). Related:
  - **Facility limited Area**: Per permittee, all usages will be within the MSW Landfill No. 101615 permit boundary except for potential use to clean up mud/sediment tracked onto SR-25 at the landfill entrances.
  - **Class A Reclaimed Water requirements**: Expanded approved usages (with greater potential for public exposure) triggered additional Class A limits/requirements (see Part A.I.H and Effluent Limits Section) via the Reverse Osmosis Treatment System. Some additional parameters were triggered due to site-specific consideration.
  - **Applicable minimum permit limits, monitoring & reporting requirements**: Summarized here.
  - **Operational limitations**: Assorted operational limitations are spelled out. For example, RO Concentrate may not be used for any purpose under this condition. Related notification requirements to other DEP Programs and MSHA/OSHA due to exposure of workers and site visitors to Reclaimed Water usages.
- **Part C.II.K (PPC Plan Update)**: The facility PPC Plan must be updated to explicitly address onsite major truck release scenarios involving RO Concentrate, Untreated Wastewater, and Treated Wastewater.
- **Part C.III (Schedule of Compliance: Ammonia-N)**: Updated water quality modeling indicated more stringent Ammonia-N limits are required to protect Middle Creek (per effluent limits section). This condition includes a 3-year schedule of compliance for meeting the new limits or otherwise showing that the more stringent permit limits are not required. The schedule is coordinated with the Part C.IV (WQBELs for Toxic Pollutants) schedule of compliance. Please note that the Application and available EDMR data appears to indicate that the facility might not meet the less stringent existing limits at the present time either.
- **Part C.IV (WQBELs for Toxic Pollutants)**: New WQBELs were required by the Reasonable Potential Analysis (see Effluent limits section), with a 3-year schedule of compliance coordinated with Part C.III. This condition sets forth the process for either coming into compliance or otherwise modifying/eliminating the new WQBELs prior to their effective date. After the new limits become effective, the permittee would have to address an identified Antibacksliding Exception requirements to obtain any relief.
- **Part C.V (WQBELs below Quantitation Limits)**: This condition addresses the new WQBELs which were detected at concentrations below the DEP Target Quantitation Limits (TQLs) or known lab capabilities (acrylamide) in terms of compliance monitoring & reporting. To demonstrate such a constituent is absent (in terms of Part C.IV permit limit requirements) would require meeting the lab-reported detected "J" value in future sample results to show that they are absent and/or to allow calculation of a Long Term Average Monthly Effluent Concentration (LTAMEC) and daily Coefficient of Variability (COV) to update the Reasonable Potential Analysis.
- **Part C.VI (Chemical Additives)**: Incorporation of standard Part C Chemical Additive Conditions. Increased usage and/or new Chemical Additives would trigger these permit requirements. Approved Chemical Additives include the Rochem Membrane Cleaner AA; Membrane Cleaner B; and Membrane Cleaner C.
- **Part C.VII (IW Stormwater Conditions)**: Standard IW Stormwater conditions (with benchmark values) added due to inclusion of IW stormwater permitting. To clarify obligations, added PAG-03 Appendix language for stormwater TQLs, and IW Stormwater NPDES Permit Part A.III.C.2 language for those requirements triggering notification requirements for changes to physical facilities (i.e. new impervious areas including new cells, changes to existing Basins, etc.) as the permittee indicated no changes anticipated in the 5-year NPDES permit term (and this permit cannot cover any proposed landfill expansion that is not permitted by the DEP Waste Management Program). The Annual IW Stormwater Report must be submitted via EDMR. The site-specific BMPs include permittee-cross-referenced overlapping stormwater/Erosion & Sedimentation Control requirements of MSW Landfill Permit No. 101615. Please note that the Reclaimed Water Usage requirements triggered additional monitoring requirements as discussed above. **NOTE**: CES Biogas LLC's PAG032414 Outfall 001 is located to the north of the landfill disposal area but application drawings show a UGI facility, fueling, and truck staging area within the Basin 3 drainage area.
- **Part C.VIII (Landfill Leachate Discharge):** Landfill wastewater is extremely variable by nature (depending on what types of wastes are being disposed). This condition, in conjunction with the Part A.III.C.2 (Planned Changes in

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Waste Streams) notification and Part C.II.I (Waste types) addresses this variability and potential impacts on effluent quality. Requirements include quarterly raw leachate monitoring & reporting (using DEP Clean Water Program Form and minimum screening limits) tied to effluent sampling & analysis due to inherent landfill leachate variability and lack of historical landfill treated effluent data (no IW Outfall discharge, no apparent discharge to POTW, no landfill process sampling data, etc.).

- **Supplemental Reports**: To clarify reporting requirements, the DMR supplemental forms will include, but not limited to:
  - Quarterly Untreated Leachate Report (CW version with signature requirements)
  - Surface Water Monitoring Data Report (for reporting Surface Water SW monitoring stream data)
  - Groundwater Monitoring Data Report (for GW monitoring point)
  - Daily Effluent Report: Will be used to report Reclaimed Water monthly sampling & analysis (Parts A.I.A, B, C) to meet beneficial use in addition to any discharge to Outfall 001 (Middle Creek)
  - **Fully Treated Wastewater Beneficial Use Reporting Form (location, amount, date) Monthly Report form** per DEP Waste Management request, specifically identifying daily volumes used for the existing/proposed beneficial uses:.
    - Precipitation: Inches precipitation that day
    - IWTP Non-potable Make-up Water (GPD) within secondary containment
    - Dust Control within MSW Landfill permit boundary: Volume and receiving drainage area (Basin and/or Stormwater Outfall)
      - Landfill Perimeter Roads (estimated 10,560 LF):
      - Landfill Paved Roads (estimated 6,500 LF):
      - Landfill Unpaved Roads (estimated 5,280 LF):
      - Landfill Working Face Dust Control (upon DEP Waste Management Program authorization):
    - Mud/Dust control on Landfill Access Roads from SR 25: GPD and receiving stormwater outfall
    - Non-potable uses:
      - Building non-potable water usage:
      - Truck Washwater:
    - Landfill revegetation irrigation on capped landfill areas: Volume and MSW Landfill Pad# where it is being applied, and receiving Basin.

Background Information:

- **Location**: The facility is located off of I-81 & SR-25 (a.k.a. Shermans Mountain Road) with a USGS-map-named site access road (a.k.a. Commonwealth Road) and additional existing adjacent access road (seen on site drawings and aerial photos). See Discharge, Receiving Stream & Water Supply Section for aerial photo. ICP indicates that there is an onsite BIOGAS LLC facility onsite that purifies Landfill LFG for uses at the neighboring Keystone Potato Products boiler. Related E-facts Sites: The overall site has PFs under multiple site numbers in E-facts:
  - 461340: MSW Landfill and AQ permits/authorizations.
  - 519608: Existing PAG-03 IW Stormwater General Permit No. PAR502208.
  - 518936: Existing IW NPDES Permit
  - 486663: Keystone Quarry Inc. Surface Mining permit (areas that appear to overlap the Material Processing and Stockpile Area outside of the 2016 MSW Landfill Permit No. 101615 permit boundary).
  - 520948: Mining Stormwater GP-104 site (Keystone Quarry 2) which may apply to the Material Processing & Stockpile Area.
  - 854855: Storage Tank by IWTP & Basin 1
  - 764617 & 588723: Storage Tanks by Basin 3.
- **Overall Site Description**: 27,972,489 SF (~642 acres) total area site with 235 acre MSW Landfill with 10,497,089 SF (~240 acres) IA Area; 37% impervious. The 5 drainage areas (5 sed basin) equate to 13,235,706 SF total area.
  - The Southern MSW Expansion Area appears to include 79.3 acres overlapping Drainage Areas 4 and 5, but boundaries are unclear if additional drainage areas would be impacted. Stormwater retention/sedimentation basins are designed for 25-year/24-hour storm events.
  - Co-located onsite industrial activities:
    - CES operates a quarry onsite in direct support of the landfill operations, The permit boundary for the quarry, which is permitted as a mining operation under Surface Mining Permit SMP No.549903091, is depicted in Figure 2A – Mining Operations Plan. Stormwater discharges from the quarry are managed separate from the landfill stormwater discharges under an NPDES permit issued by PA

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DEP Bureau of Mining, PAM112040. Stormwater features associated with this permit, including sumps, sediment traps and drainage areas are shown on Figure 3A – Mining E&S Overall Plan.
    - The landfill gas to energy (LFGTE) plant operated by CES Biogas is adjacent to the landfill site, but not within the landfill permit boundary. CES Biogas is under IW Stormwater General Permit PAG03414 per application. Some LFG was historically sent across SR-25 to a separate company (Keystone Potato) for beneficial use. However, the ICP drawings still show a UGI subfacility within the landfill area.
  - See table below for IW Stormwater Outfall and Surface Water Monitor Point information. See Effluent Section for additional IW Stormwater information.
- **IWTP Flow Rates**: The facility has not been discharging via NPDES Permitted IW Outfall No. 001 (see discussion below).
  - Original Design: The IWTP is designed for a 0.090 MGD influent hydraulic loading, with ~0.081 MGD discharge (with remainder ~10% RO Concentrate either landfilled or shipped offsite for disposal.
  - Actual Discharges:
    - The 2025 Revised "Effluent Reuse Management Plan" (ERMP) Section 1.0 notes that the facility does not currently discharge to the SCMA Gordon POTW and has not for the past few years.
    - EDMR indicates no permitted IW discharges via the permitted IW Outfall No. 001 to Middle Creek since 2018.
    - See Compliance Section about apparent unauthorized discharges to Swatara Creek via "Stormwater Outfall No. 001".
  - NPDES Application Form flows: Estimated 0.071 MGD average wastewater flows during operation with maximum 0.083 MGD flow (with the facility using two (2) 1.5-MGD influent Raw Leachate Tanks and one (1) 1.0-MG Treated Effluent Tank for higher flows, and beneficial use of fully treated wastewater for beneficial use (primarily dust control) onsite)). Anticipated annual average production rate over next 5-years is 0.085 MGD, which is below the 0.090 MGD IWTP treatment system influent hydraulic design capacity.
  - Average Annual Landfill Wastewater generation rates were estimated at: 0.083 MGD (2020), 0.059 MGD (2021), 0.074 MGD (2022), 0.073 MGD (2023), and 0.069 MGD (2024). The estimated annual average flow of 0.085 MGD was estimated for the next five (5) years on the basis of unprovided MSW Landfill "HELP" Model (which models average leachate production rates based on precipitation, landfill capping/closing sequence through time, etc.). The facility uses onsite tankage to handle high flow months' leachate volumes.
  - Figure 5 (Water Balance Line Diagram): Landfill Flows information:
    - Site-generated Sanitary Wastewater: Estimated 295 GPD sanitary wastewater flows without clarification on how the flow gets to the IWTP for treatment. Sanitary wastewater generated from toilets and/or sinks located at the office building, guard house, maintenance shop and LTP building is conveyed to the LTP for treatment
    - Truck Washwater: Estimated 68 GPD Truck Wash flow (to go to IWTP) without clarification of how the flow gets to the IWTP.
    - Trucked Offsite for Disposal: Untreated Leachate and/or RO Concentrate: Volume unidentified
    - SCMA Gordon POTW Connection: The facility can discharge pretreated wastewater to the SCMA Gordon POTW. 2024 SCMA Gordon Chapter 94 Report indicated the available authorized capacity (dedicated to CES) is less than the landfill average daily leachate generation rate. It was unclear if the POTW has capacity to accept all landfill wastewater (if needed). It is unclear if the facility has been discharging to this POTW in recent years.
    - Groundwater Water Usage onsite: Facility estimates that it might use 9,600 GPD onsite hydrant water supply (well water) for dust control purposes, based on monthly average usage between July 2024 through June 2025. Site groundwater is AMD-impacted due to historic area mining and permittee statements and application water well sampling data.
    - LFG Condensate: Process wastewater from the LFTE plant (LFG condensate) is also conveyed to the LTP for treatment.
    - Other: There is no process wastewater generated at the quarry and CES does not have a pug mill operation.
    - Orphan AMD discharge or seepage from the site is managed by the Mining Program. CES has worked in cooperation with the Mining Program on these issues since the original landfill permit issuance.
- **Site-Related DEP Permits**:
  - Waste Management Permit: MSW Landfill Permit No. 101615:

Summary of Review

- Overlapping requirements for leachate management; an approved MSW Landfill groundwater monitoring system with surface water monitoring points (overlapping in terms of dust control beneficial reuse monitoring); and E&S Control Plan (stormwater-related). Site-generated sludge is disposed onsite under the MSW landfill permit. The Leachate Management System was shown to include two (2) 1.5-MG Untreated Leachate Storage tanks directing wastewater to the IWTP, the IWTP treatment process, and one (1) Effluent Storage Tank, with separate RO Concentrate storage tanks.
- The facility recirculates up to ~18,000 GPD Reverse Osmosis (RO) Concentrate (from IWTP) via the lined landfill working face under the MSW Landfill permit and/or ships it offsite for disposal.
- Proposed Southwestern Expansion Information: The facility is (separately) proposing a separate MSW Landfill Amendment for a Southeastern Expansion, but the Expansion is not addressed in this NPDES Permitting action. No MSW Landfill Permit Amendment and/or other DEP permit have been issued for this proposed expansion to date.
    - The DEP MSW website indicates CES Landfill is an existing **484.9-acre** landfill (in a 1900.9-acre property) with a proposed Southwest Expansion (new disposal area plus vertical expansion over existing disposal areas) with an April 14, 2025 DEP First Environmental Assessment Review Landfill Letter. The letter noted issues including elevated nitrate levels in the original southern expansion area, and need to detail any geological investigations/mitigation related to mining due to strip-mined and deep mined areas. An update on the investigation into the source of elevated Groundwater constituents should be provided, with an abatement plan with expansion application. A 12/6/2024 (supplemented 4/22/2025) MSW Landfill Application was identified.
    - In event of substantial changes in the future to the permitted stormwater controls (new sed basins, etc.), a NPDES Permit Amendment might be required. The drawings show a potential future Basin 6. In practical terms, simple pad 1 construction would not trigger NPDES permitting amendment requirements but significant changes to the Sed Basin/Stormwater basin or outfall would.
- DEP Waste Management Files included facility drawings with the following breakdown:
    - 102-acre Existing Original MSW Limits
    - 27.23-acre Northern MSW Expansion Limits
    - 79.3-acre Southern New Expansion Limits
    - Quarry/Material Processing and Stockpile Area – shown outside MSW Landfill permit boundary on Northern side

- Mining Permit: Quarry Area Mining Permit No. 54120901 and Mining Stormwater GP# PAM112040. There is adjacent quarry mining under the PADEP Mining Program (under a Mining Stormwater Permit) and an onsite orphan AMD discharge (seepage) under PADEP Mining Program oversight. The Orphan AMD discharge appears to have an existing Anoxic Drain (per CES drawing) and would discharge to the intermittent UNT to Swatara Creek that also receives Sed Basin No. 1 discharge.
- Air Quality: Title V Operating Permit No. 54-00055 addresses site emissions (including dust)
- Storage Tanks: There is 20,000-gallon AST diesel fuel tank onsite (near Admin Building) and assorted AST/UST tanks at the Maintenance/Shop building

- **Class A Reclaimed Water Reuse a.k.a. Approved Beneficial Uses of Fully-Treated Wastewater**: Reuse of fully treated landfill wastewater (Reclaimed Water Reuse) was previously permitted also under 12/14/2011 WQM Permit No. 5411403, with several additional reuses being requested in the NPDES permit renewal application.
    - DEP Technical Guidance: The DEP Policy No. 385-2188-002 (Reuse of Treated Wastewater Guidance Manual) provides general guidance on requirements for reuse of domestic wastewater (but would not cover wastewater reused/recycled as part of an industrial process, but the proposed uses here do not include process water usage). In practical terms, the landfill wastewaters trigger additional considerations due to constituents/constituent concentrations not likely found in domestic (sanitary) wastewaters, with the Guidance reflecting minimum requirements:
        - The Manual was designed so that soils are not required to provide additional treatment of the wastewater. A land application system (where soils play a role in treatment to protect the waters of the Commonwealth) would fall under land application manual requirements (such as for spray irrigation) to address any soils treatment (for effluent quality). **NOTE**: A draft revised land application manual is out for public comment but is not yet effective.
        - "Reclaimed water" is treated wastewater being used as a substitute for water withdrawn from a surface or groundwater source. **NOTE**: This definition excludes non-use discharges.

Summary of Review

- Reclaimed water should be applied for irrigation purposes at limited rates. Application rates may vary by season. Irrigation demand may be estimated by determining the total irrigable acreage, along with the estimated weekly irrigation rates.
- Non-potable water, such as reclaimed wastewater, treated to the appropriate quality, which in some cases includes meeting all drinking water standards, may be substituted for potable water in these uses (car washing, residential irrigation, etc.), without compromising quality.
- The WQM permit minimum screening requirements were consistent with Class C Reclaimed Water in terms of BOD5, TSS, and Fecal Coliform reused domestic wastewater (secondary treatment and disinfection but no public exposure). More stringent Class A limits and monitoring requirements now pertain to greater public exposure via commercial toilet/urinal flushing, street cleaning, dust control on working face (commercial truck driver exposure, etc.), commercial vehicle washing, etc.
    - See Part A.I.H (Outfall 102) and Effluent Limits Section for how Class A and other requirements are being addressed. The previous WQM permit Class C requirements (below) are superseded:

Parameter	Average Monthly	IMAX	Monitoring Frequency	Sample Type
BOD5	<30 mg/l	45 mg/l	Weekly	Grab
TSS	<30 mg/l	45 mg/l	Weekly	Grab
Fecal Coliform	<200/100 ml	800/100 ml	Weekly	Grab

    In practical terms, the permittee-proposed Effluent Reuse Monitoring Plan (ERMP) monitoring plan (with IW Stormwater Outfall, Groundwater Monitoring Well, and Surface Monitoring points monitoring/reporting requirements) have been incorporated into this NPDES Permit with modifications (including minimum monthly monitoring & reporting for Part A.I.A through A.I.C parameters).
    - Per policy: Where “Other contaminants” is listed as a parameter to monitor, it is because the reuse application has the potential of impacting drinking water. To prevent degradation of drinking water sources, it is necessary that these parameters meet the drinking water maximum contaminant levels on a running annual average basis, calculated quarterly. No parameter should exceed the limit established for the maximum concentration.
        - These other parameters are addressed by the minimum monthly monitoring (Part A.I.A through A.I.C parameters) and modified ERMP monitoring plan incorporating MSW landfill ground & surface water monitoring system (including IW Stormwater Outfall monitoring).
- Minimum Annual Reporting: An Annual Reuse Report is required for total reuse water flow, including:
    - The total flow reused with respect to the total flow treated by the wastewater treatment facility.
    - The total annual flow to each approved reuse location (name each reuse location).
    - The maximum monthly average flow over the past 12 months for each reuse site
    - Per Land Application Manual: The facility daily records should contain a log of temperature, precipitation form and amount, wind direction, and wind speed if the facility chose to pursue land application options (i.e. soils treatment of effluent percolating to groundwater).
- MSW Landfill Requirements: There are no existing conditions within the MSW Landfill permit No. 101615 associated with the beneficial use of treated wastewater. **NOTE**: The DEP Waste Management Program and other permitting programs retain separate authority to impose any additional or more stringent requirements under their separate/concurrent permits.
- Previous WQM Permit-Approved Reuses of Reclaimed Water (Fully-treated Effluent):
    - Dust control on roadways within the landfill permit boundary.
    - Non-potable make-up water in the leachate treatment plant. **NOTE**: The WQM Permit application mentioned use in foam, but it was not approved if anything was meant other than use within the IWTP building. There had been foam cover materials usage at other landfills.
- Additional Requested Beneficial Reuses of Reclaimed Water (fully-treated wastewater):
    - Dust control within the lined landfill cells (i.e. working face)
    - Truck/Tire Wash water

Summary of Review

- Non-potable use in landfill buildings
- Dust control on the landfill access roads (on the landfill cells)
- Irrigation on vegetation on landfill cover areas.
- Mud/sediment tracking onto SR-25: Water is also needed to control mud during wet weather (to prevent offsite tracking of mud i.e. mud tracking onto public roads, etc.).

NOTE: Application mentioned benefits of reuse in the "material handling process" but did not identify the specific reuse being discussed.

- Application Information/commitments:
  - Dust control within MSW Landfill permit area (8/19/2025 Response Letter Item 3.b & 3.e): CES will use treated effluent for dust control on-site on the landfill access road and perimeter roads, that is, within the MSW landfill permit boundary. The application Figure 2 (Site Plan) showed the MSW Landfill Permit boundary as extending from SR northward (including original MSW landfill area, northern MSW expansion, and Southern MSW Expansion area limits), but excluding quarry mining area under DEP Mining permits. The application Figure 3 (Topo Map w/Drainage Areas) shows the basin drainage areas do not include access roads from SR to landfill disposal areas, and possibly some perimeter roads.
  - Irrigation usage (8/19/2025 Response Letter Item 3.c): Concern for the leaching of nitrogen from the final cover material into the stormwater channels along the perimeter of the disposal area will be mitigated by avoiding irrigation until vegetation has fully established and limiting the application rate to avoid oversaturation of the soils. **NOTE**: Visual check required to ensure no visible runoff from application area and/or over-saturation (discharging to groundwater).
  - Building non-potable water uses (8/19/2025 Response Letter 3.d): Sanitary wastewater generated from toilets and/or sinks located at the office building, guard house, maintenance shop and IWTP a.k.a. LTP building is conveyed to the IWTP for treatment.
  - Other Usages (8/19/2025 Response Letter 3.d): CES will pursue approval for additional uses of treated effluent separately from this application. **NOTE**: The Department would make a case-by-case decision regarding any additional proposed usage of Reclaimed Water (fully-treated effluent).
- Other Application Information and Identified Usage Restrictions:
  - Dust Control: They store treated wastewater effluent in a 1.0-MG storage tank. Effluent is loaded into tanker trucks and the trucks proceed to the designated use area and apply the water.
    - The vehicles are in motion when effluent is being applied and effluent is used only in areas as needed and under conditions suitable for beneficial use.
    - Application rates are controlled to minimize ponding and runoff. Efforts are made to prevent over-application resulting in runoff. Heavy traffic areas may have multiple application each day to prevent dust generation.
    - The Site was estimated to have:
      - Minimal average dust control water usage needs estimated was 24,179 GPD minimum for perimeter roads, paved roads and landfill roads, with higher usage due to actual site conditions during 28 operating days per month
      - 10.560 LF of unpaved roadways within the Site with estimated need of 9.874 GPD for 28 operating days per month
      - 6,500 LF of paved roadways within the Site with estimated need of 6,078 GPD for 28 operating days per month
      - 5,280 LF of roadway on the lined landfill areas with estimated need of 8,228 GPD for 28 operating days per month
      - Total monthly need estimate at: 24,179 GPD, with assumed higher actual use due to unaccounted losses from truck traffic (which should be minimal if tanker trucks are adequately maintained).
      - The access road is not included within the drainage areas for the stormwater basin outfalls; however, this road is not located in an area with industrial activities, and stormwater concerns for this road would be limited to sediment from erosion and truck traffic. **NOTE**: New stormwater outfalls

Summary of Review

for access road/entrances from SR being added for mud cleaning/street sweeping.

- Raw Influent Sampling: Flow diagram shows influent sampling location at pump station prior to the two 1.5-MGD raw leachate storage tanks that presumably also receive any sanitary wastes, truck washwater, etc.
- Proposed Irrigation Usage on Final Cover Vegetation: CES has investigated the use of RO treated effluent as irrigation to support biomass on finished vegetated capped landfill areas in addition to use for dust control. Any precipitation or applied effluent that infiltrates into the final cover drainage system and ultimately reach the stormwater collection network would be monitored by the collection of surface water samples at the outfalls to ensure that there is no adverse impact on stormwater runoff quality. Concern for the leaching of nitrogen from the final cover material into the stormwater channels along the perimeter of the disposal area will be mitigated by avoiding irrigation until vegetation has fully established and limiting the application rate to avoid oversaturation of the soils.
- Truck Loading and Application: When conditions permit, effluent is loaded into tanker trucks at the treatment plant building and the trucks proceed to the designated use area and apply the water. Effluent is used under controlled conditions. The vehicle is in motion when effluent is being applied and effluent is used only in areas where needed and under conditions suitable for beneficial use. Efforts are made to prevent over application resulting in runoff. Heavy traffic areas may have multiple applications each day to prevent dust generation.

▪ Additional Reuse Monitoring Requirements/Information:

- Additional ERMP Proposed Effluent Reuse Monitoring Requirements: The parameters were included in the NPDES monitoring requirements.
  - pH (grab): No limits proposed by permittee
  - Specific Conductivity (measured from RO Unit): No limits proposed by permittee
  - Nitrate-N (grab): No limits proposed by permittee
  - Ammonia-N (grab): No limits proposed by permittee. One lab sample indicated 9.26 mg/l (exceedance of NPDES Permit No. PA0065307 Ammonia-N limit)
- Groundwater Monitoring (23 GW wells): Groundwater monitoring well samples are collected quarterly from the Site's groundwater monitoring wells and the analytical results are reported to PADEP in accordance with the Site's solid waste permit. The groundwater monitoring points are sampled and analyzed as required by the landfill permit (and are focused on the landfill cell areas, not all landfill access roads. ERMP-listed monitoring points included:
  - Original Landfill and Northern Expansion Area: MW-1U, MW-4D, MW-5D, MW-6D, MW-7D, MW-8D, MW-11D, MW-12D, MW-13D, MW-14D, MW-15U, MW-16D, MW-17D, MW-18D, MW-19D, MW-20D, MW-32U, MW-33D
  - Southern Expansion Area: MW-21D, MW-22D, MW-23D, MW-24D, MW-25D
- Surface Water Monitoring (5 surface water monitoring points): Surface water samples are collected quarterly and the analytical results are reported to PADEP in accordance with the Site's solid waste permit. The surface water monitoring points are sampled and analyzed as required by the landfill permit (with 2018 version referencing PADEP Waste Management Form 19 parameters for quarterly monitoring). There are currently five (5) permitted surface water monitoring points sampled to evaluate surface water conditions at the Site.
  - Original Landfill and Northern Expansion Area: SW-1, SW-1UN, SW-2
  - Southern Expansion Area: SW-4D, SW-5D
  - SW-3: Middle Creek, listed in previous 2018 Draft ERMP (Effluent Reuse Monitoring Plan). When installed, monitoring will be required as there is no other Middle Creek surface water monitoring point.
  - Correlations: The monitoring points correlate to the site's permitted stormwater outfalls as follows:
    - SW-1: Outfall 002 – conflicts with CES figure
    - SW-1 UN: Outfall 001 – shown on CES figure
    - SW-2: Between Drainage Area 2 and 3, no Outfall correlation – shown on CES figure
    - SW-3: Not installed yet, but on Middle Creek which received IW Outfall No. 001 and Stormwater Outfall No. 003 discharges.

Summary of Review

- SW-4: Outside of Drainage Area 5, no Outfall correlation
- SW-5: Outside of Drainage Area 4, no Outfall correlation

- Stormwater Monitoring Points: The IW Stormwater Outfalls are part of the proposed ERMP and incorporated into the NPDES permit:
  - Five (5) existing stormwater monitoring points (001 which is being redesignated 006, 002, 003, 004, and 005). Previously only 001 – 003 was being monitored for Application identified Sediment Basin/Pond drainage areas shown on drawings).
  - Three (3) landfill entrance roads and adjacent roads are shown outside the identified landfill basin drainage areas (new Outfalls Nos. 007 – 009 for entrance points). Outfall Nos. 007, 008, and 009 created for the SR-25 entrance locations for mud/sediment cleaning reuse. Outfall 009 might be on lands of Schuylkill Recycling Center Inc. per figure.
  - Mining Stormwater permit outfall location not addressed in this Renewal Application or this permit.

- IW Outfalls/SW Monitoring Point:

SW Outfall	Description	Drainage Area (uncertain what stage of construction is represented)
001 (now 006)	Sed Pond 1 discharge with ultimate discharge to Swatara Creek	2,357,032 SF (61% impervious); Drainage Area 1 has 54.11 acres. Stormwater from capped sanitary landfill and IWTP (including wastewater and RO Concentrate tanks). 2021 Annual Report indicated unpaved roads and capped/partially capped landfill areas. SW-1 is not located at the sed basin 1 Outfall, but is located at the intermittent stream flowing to main branch of Swatara Creek. BMPs: Stormwater basin & sed traps per 2021 Annual Report
002	Sediment Pond 2 discharge to Swatara Creek	4,322,023 SF (53% impervious); Drainage Area 2 has 99.22 acres. Stormwater from capped sanitary landfill. 2021 Annual Report indicated unpaved roads and capped/partially capped landfill areas. Paved parking per 2023 PAG-03 NOI renewal application (superseded). BMPs: Stormwater basin & sed traps per 2021 Annual Report
003	Sediment Pond 3 discharges to Middle Creek	1,862,190 SF (67% impervious); Drainage Area 3 has 42.75 acres. Stormwater from capped sanitary landfill, maintenance garage, fueling area, paved parking, and truck staging area. BMPs: Stormwater basin & sed traps per 2021 Annual Report
004	Sediment Pond 4 discharges to Swatara Creek	1,955,844 SF (58% impervious); Drainage Area 4 has 44.90 acres. Stormwater from capped sanitary landfill and appears to overlap part of Southern MSW Expansion area. BMPs: Stormwater basin
005	Sediment Pond 5 discharges to Gebhard Run, not in PAR permit	2,738,617 SF (78% impervious); Drainage Area 5 has 62.87 acres Stormwater from capped sanitary landfill, cover material stockpile, and gas flares and appears overlap part of Southern MSW Expansion area. BMPs: Stormwater basin SW-4: Outside of Drainage Area 5, no Outfall correlation
007	Access Road (Commonwealth Road) from SR 25 to address any usage of treated effluent for dust control & mud removal	NEW Route 25/Commonwealth Road Site Entrance Road intersection, with topography directing flow to Gebhart Run per NHD Locator. Not part of any application-identified drainage area. BMPs: None identified Lat: 40.665408°; Longitude: -76.378174°
008	Access road from SR-25 in addition to main access road to address any usage of treated effluent for dust control & mud removal	NEW Route 25 site access Road intersection, with topography directing flow to Gebhart Run. Not part of any application-identified drainage area. BMPs: None identified Lat: 40.665441°; Longitude: -76.376500°

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009	Access road from SR-25 along eastern side of landfill, shown on topo, figures, and aerial photo as Commonwealth Road.	NEW Route 25 site access Road intersection, with topography directing flow to Gebhard Run. Not part of any application-identified drainage area. BMPs: None identified Lat: 40.664887°; Longitude: -76.366759°
SW-1	Near Basin 1	Original landfill and Northern expansion area with discharge to Swatara Creek. SW-1 is not located at the sed basin 1 Outfall, but is located at the intermittent stream flowing to main branch of Swatara Creek, but receives treated Sed Basin 1 flows. ERMP Figure shows SW-1 Untreated upstream of SW-1. The "Exist. Anoxic Drain" discharges at or in-between the two SW monitoring points. Lat: 40° 40' 32.61"; Long: -76° 22' 26.19"; Elevation: 1530.00 Feet
SW-1 UN	See above	Original landfill and Northern expansion area with discharge to Swatara Creek. SW-1 Untreated is located near an existing Anoxic Drain (Orphan AMD-related) along the intermittent UNT to Swatara Creek; adjacent to SW-1 Lat: 40° 40' 32.61"; Long: -76° 22' 26.19"; Elevation: 1530.00 Feet
SW-2	-	Original landfill and Northern expansion area discharging to pond SW-2 is located near Gas Flares Area/Maintenance Building area and Sed Basin 3, but no intermittent stream channel shown on CES drawing. Between Drainage Area 2 and 3, no Outfall correlation – shown on CES figure. A different CES drawing shows springs and apparent wetlands at SW-2 (i.e. wet area but not free-flowing stream). Elevation: 1563.00 Feet
SW-3	-	Southern expansion area, on Middle Creek. Does not exist at present. SE Expansion drawing shows a proposed SW-3D at Middle Creek. Lat: 40° 39' 53.20"; Long: -76° 23' 07.10"; Elevation 1360.00 Feet
SW-4		Southern expansion area, on Gebhard Run and outside MSW Landfill permit boundary. Outside of Drainage Area 4, no Outfall correlation and on Gebhard Run. Located along SR-25 roadway, on Schuylkill Recycling Center Inc. property. Latitude: 40°, 39', 53.65"; Longitude: -76°, 22', 01.50" (Elevation 1357 Feet)
SW-5		Southern expansion area, on Swatara Creek outside of MSW Landfill permit boundary. Outside of Drainage Area 5, no Outfall correlation, drawing places it on Swatara Creek, north of SR 25. Latitude: 40°, 40', 20.11"; Longitude: -76°, 21', 45.45" (Elevation 1347 Feet)

Public Comments on 2016 Draft NPDES Permit:

The 10/28/2016 CES (EarthRes Group) Letter, 11/17/2016 CES (EarthRes Group) Letter, 11/30/2016 CES (Brett Dexter) Letter, and 10/18/2019 CES (EarthRes Group) Letter contained the following public comments, with Department response bolded:

Nutrient Monitoring and Reporting (Part A Reporting): For purposes of nutrient trading, CES requested that nutrient values reported as "non-detected" (ND) be considered zero (0) for the purposes of calculating nutrient limits, given the existing zero net annual mass loading limits and nutrient trading conditions. Nutrients are Total Phosphorus and Total Nitrogen (Total Kjeldahl Nitrogen + Nitrate-Nitrite as N measured in the same sample). **The EPA Sufficiently Sensitive Rule requires the Department to treat any insensitive Non-Detect Level as the constituent being present at the insensitive ND level. The Department Bureau of Laboratories has developed Target Quantitation Limits (TQLs) that are sufficiently sensitive. If ND at the TQL, the Department will assume the absence of the nutrient for reporting purposes. The Department Target Quantitation Limits (TQLs) for nutrient constituents are:**

- **Total Phosphorus: 0.01 mg/l**
- **Nitrate-Nitrite as N: 0.05 mg/l**
- **Total Kjehldahl Nitrogen (TKN): 1.0 mg/l**

Part C.II.C (Relationship to WQM Permits): CES requested deletion of this permit condition. The permit condition notes that the terms and conditions of previous Part II WQM permit conditions, relating to discharge requirements, are superseded

Summary of Review

by this NPDES Permit unless otherwise stated. CES was concerned about possible misinterpretation of the condition to apply to beneficial use of treated wastewater (primarily leachate) under WQM Permit No. 5411403. CES believes the WQM permit requirements to be separate and distinct from the NPDES Permit requirements. CES believes the condition to be redundant and obscuring discharge requirements. **The Department could not grant this request for deletion of this permit condition, as it is a standard condition that clarifies applicable minimum discharge requirements. The NPDES and WQM permit overlap and complement each other.**

- **The NPDES Permit requirements govern for any beneficial use of treated wastewater outside of secondary containment. The WQM Permit Standard Condition No. 6 explicitly referenced the NPDES Permit effluent requirements (Standard Conditions). The WQM Permit also included sampling and analysis of indicator constituents (BOD5, TSS, Fecal Coliforms allowing for storage tank settlement/stratification) for the approved beneficial use(s), but the NPDES Permit limits govern.**
- **If CES believes the WQM Permit should be amended to prevent future confusion, it is free to submit an application for WQM permit amendment to modify existing WQM permit language.**

Part C.II.F (Site-specific condition for beneficial use of treated wastewater outside of existing waste management covered permitted areas): CES requested deletion of this permit condition. The 10/18/2019 Letter stated: "Based upon recent discussions with CES, it has been determined that effluent reuse for dust control at CES will only occur in permitted areas of the facility that fall within the monitoring program of the existing waste management permit", and noted CES would request a meeting with the Department if this ever changes. Earlier public comments noted CES's belief that the WQM permit No. 5411403 requirements are separate and distinct from the NPDES Permit requirements. CES stated leachate treatment produces a high quality effluent precluding the need for intense site monitoring. CES has committed to the use of effluent from the two pass reverse osmosis treatment process to reduce the need for groundwater withdrawal at the site and reduce fugitive emissions from site roadways. CES stated that effluent use at CES has been documented since 2012 with no adverse impact detected. Therefore, this condition is unnecessary and should be deleted. Any changes deemed necessary by the Department relative to beneficial effluent use should be made through the WQM permit. **The Department has substantially revised this Redraft NPDES Permit due to proposed new Reclaimed Water usages (triggering Class A Reclaimed Water usage requirements), new Effluent Reuse Monitoring Plan (ERMP), etc. Contrary to the public comment, the Part I WQM Permit and Part II NPDES Permit have overlapping and complementary relationships that require both permits address the Reclaimed Water Usages.**

- **In practical terms, the November 17, 2016 CES Letter included an Existing Site Plan showing the existing MSW Landfill Permit No. 101615 permit boundary as excluding the Material Processing and Stockpile Area, and adjacent properties including the Hillside Composting Corporation, etc.**
- **In addition, the referenced WQM Permit No. 5411403 Standard Condition No. 6 explicitly incorporates by reference the NPDES Permit No. PA0065307 effluent requirements, monitoring requirements, and other conditions (in addition to the Special Condition No. A minimum effluent monitoring requirements) for weekly monitoring for BOD5, TSS, and Fecal Coliform indicator constituents (for RO-treated wastewater being beneficially uses).**
- **See above section and Compliance History Section about overlapping requirements.**

Treated Effluent Usage and Usage Areas (10/28/2016 CES Letter; January 2018 Draft Treated Effluent Reuse Monitoring Plan): The 10/28/2016 CES (EarthRes Group) Letter described the beneficial usage of the treated effluent being treated at the 0.090 MGD IWTP (with one existing RO treatment train with two membrane filters with peak 0.110 MGD capacity). The Attachment E contained an updated site plan (Southern Expansion Reconfiguration). The January 2018 Draft Treated Effluent Reuse Monitoring Plan indicates the established and proposed monitoring points "provide a comprehensive network to monitor groundwater and surface water quality at the Site. The network covers the area proposed for effluent reuse on the landfill property". **See above for updated ERMP information & related.**

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania*

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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	Design Flow (MGD)	0.090 (001) 0 (003, stormwater only)
Latitude	40º 39' 55.03" (001) 40º 39' 54.31" (003)	Longitude	-76º 23' 7.98" (001) -76º 23' 7.20" (003)
Quad Name	Tremont	Quad Code	1334
Wastewater Description:	IW Process Effluent with ELG, Sewage Effluent (001) Stormwater (003) from Sediment Basin 3		

Receiving Waters	**Middle Creek (CWF, MF)**	Stream Code	10078
NHD Com ID	133783947	RMI	~4 miles (001)
Drainage Area	0.44 square miles	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	0.044	Q_{7-10} Basis	Statewide LFY default
Elevation (ft)	1432	Slope (ft/ft)	-
Watershed No.	7-D	Chapter 93 Class.	CWF, MF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired		
Cause(s) of Impairment	METALS		
Source(s) of Impairment	ACID MINE DRAINAGE		
TMDL Status	Final, Final	Name	Upper Swatara Creek Watershed, Upper Swatara Creek Watershed (metals, pH, TSS)

Background/Ambient Data: None available		Data Source
pH (SU)	-	-
Temperature (°F)	-	-
Hardness (mg/L)	-	-
Other:	-	-

Nearest Downstream Public Water Supply Intake		LEBANON CITY WATER AUTH ID# 101738-001	
PWS Waters	Swatara Creek	Flow at Intake (cfs)	-
PWS RMI	-	Distance from Outfall (mi)	>20 miles

Changes Since Last Permit Issuance:

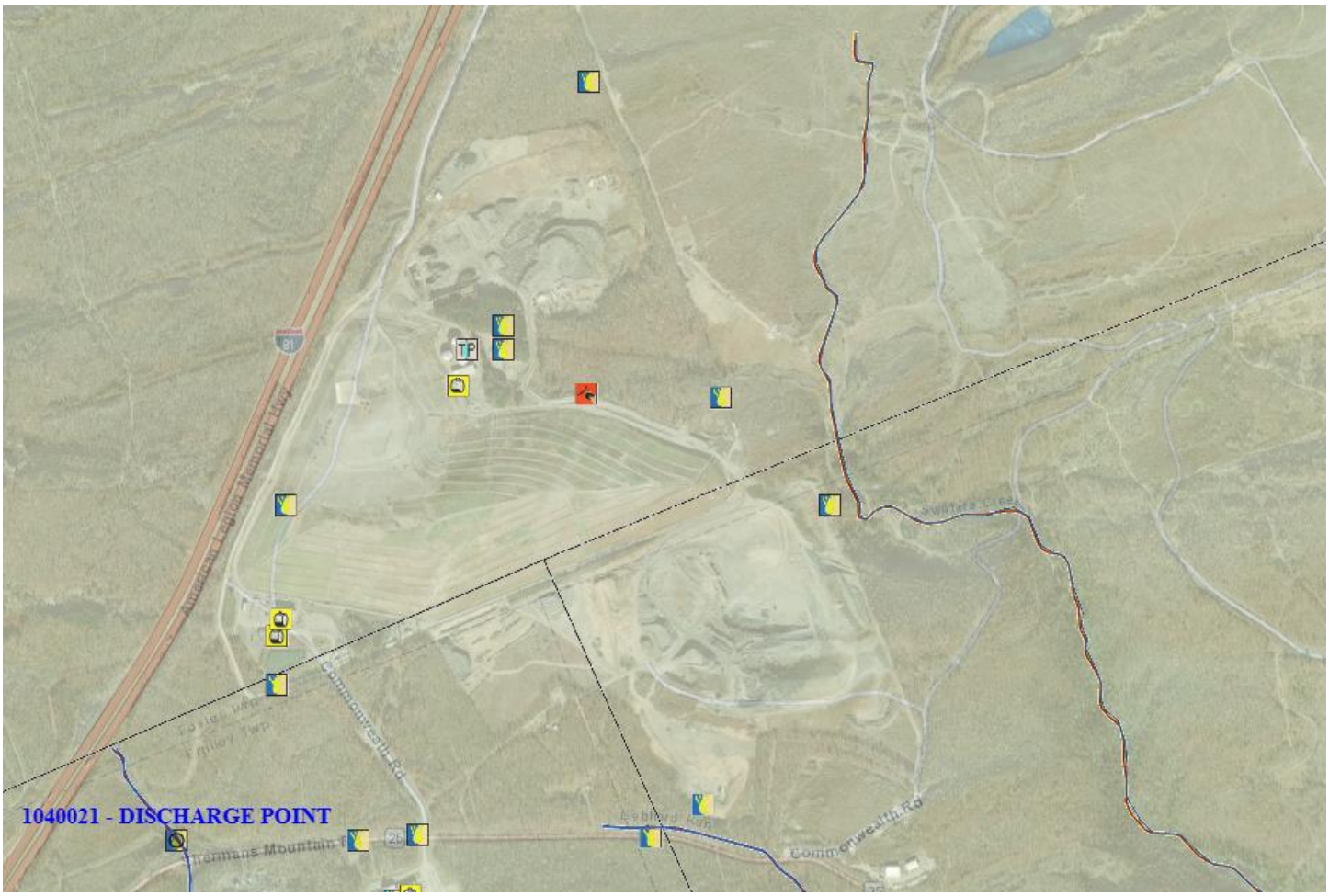
- Reclassified as Trout Natural Reproduction Stream.
- Per the 11/14/2016 DEP Biologist (Sherril Leap) Point of First Use (POFU), the POFU for Middle Creek was at the site (i.e. Outfall 001) on Middle Creek. Metals were at detectable concentrations for ambient Middle Creek conditions.
- New application information:
    - Well water sampling (dust suppression Hydrant) by CES Technical Consultant: The water chemistry from this sample is typical of what's observed in the background CES groundwater monitoring system, characterized by low pH (< 6 S.U., i.e. 5.4 SU field), low alkalinity (<20 mg/L), low ammonia (<0.5 mg/L), low nitrate (<0.5 mg/L), with iron (3.08 mg/l) and manganese (0.351 mg/l) concentrations that exceed their respective PADEP Secondary Maximum Contaminant Levels (MCLs). This well water is used for dust control and other non-potable water use onsite.
    - Site non-potable water well sample result provided, including: 5.4 SU pH (Field), 3.08 mg/l Total Iron, 0.351 mg/l Total Manganese, i.e. AMD-impacts

Other Comments:

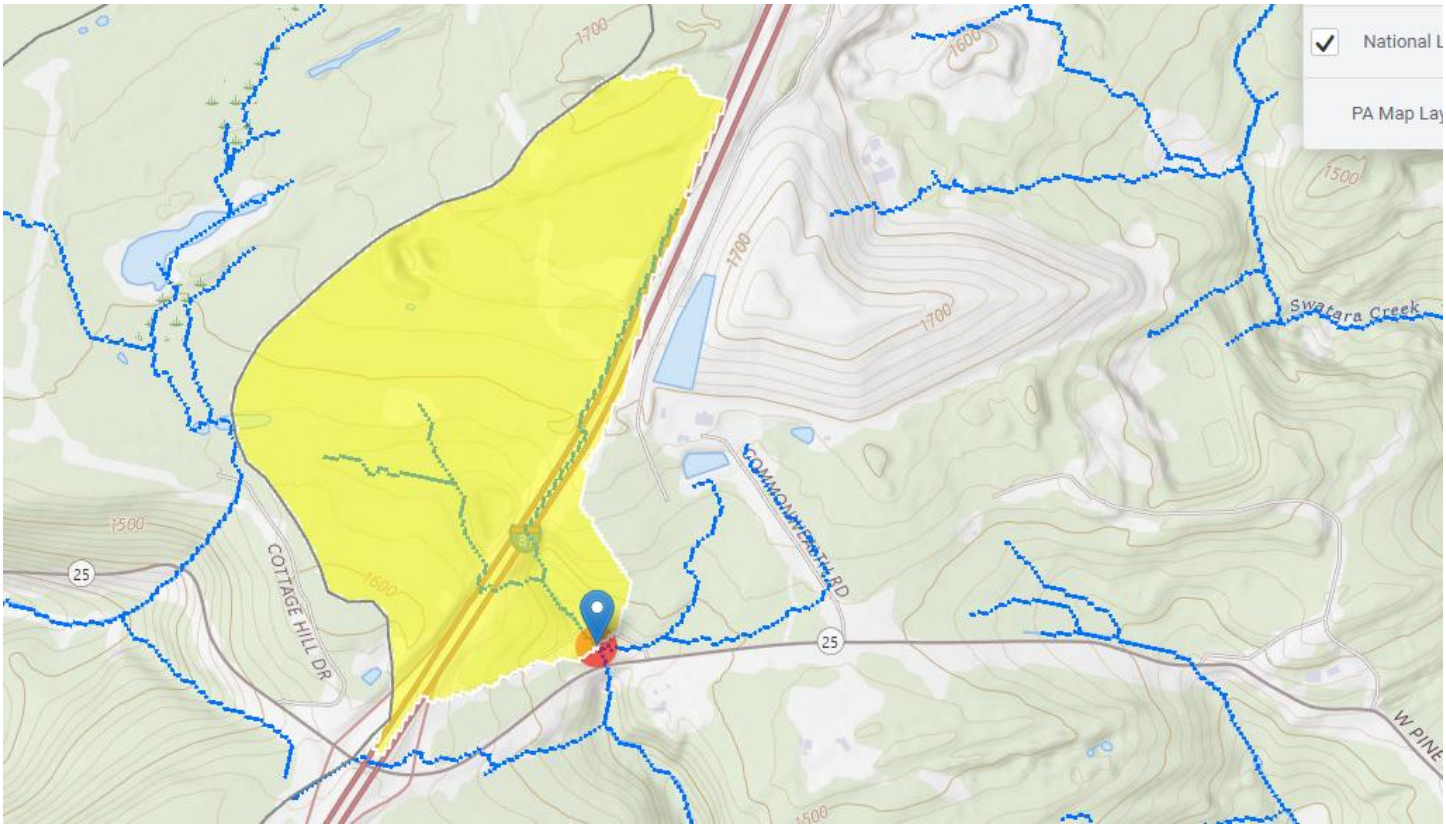
The entire area is historically mining disturbed. The outfalls are near the headwaters, with the stream attaining near the landfill but numerous Orphan AMD impacted downstream. Middle Creek flows into Swatara Creek. Besides Basin 3 flow, Middle Creek receives drainage from I-81 corridor and other side of I-81 drainage area.

Q7-10 low flow: Used statewide LFY default (0.1 CFS/square mile). PA Streamstats would be biased by downstream AMD discharges and regrading (in addition to being too small an area for the regression equations). Downstream Swatara Creek USGS gage data would be biased by numerous Orphan AMD discharges. **NOTE**: The facility may have enough site-specific groundwater data to allow a PA Licensed Professional Geologist (LPG) to determine onsite groundwater recharge rates to Middle Creek during Q7-10 low flow conditions (i.e. Low Flow Yield value) under his/her seal.

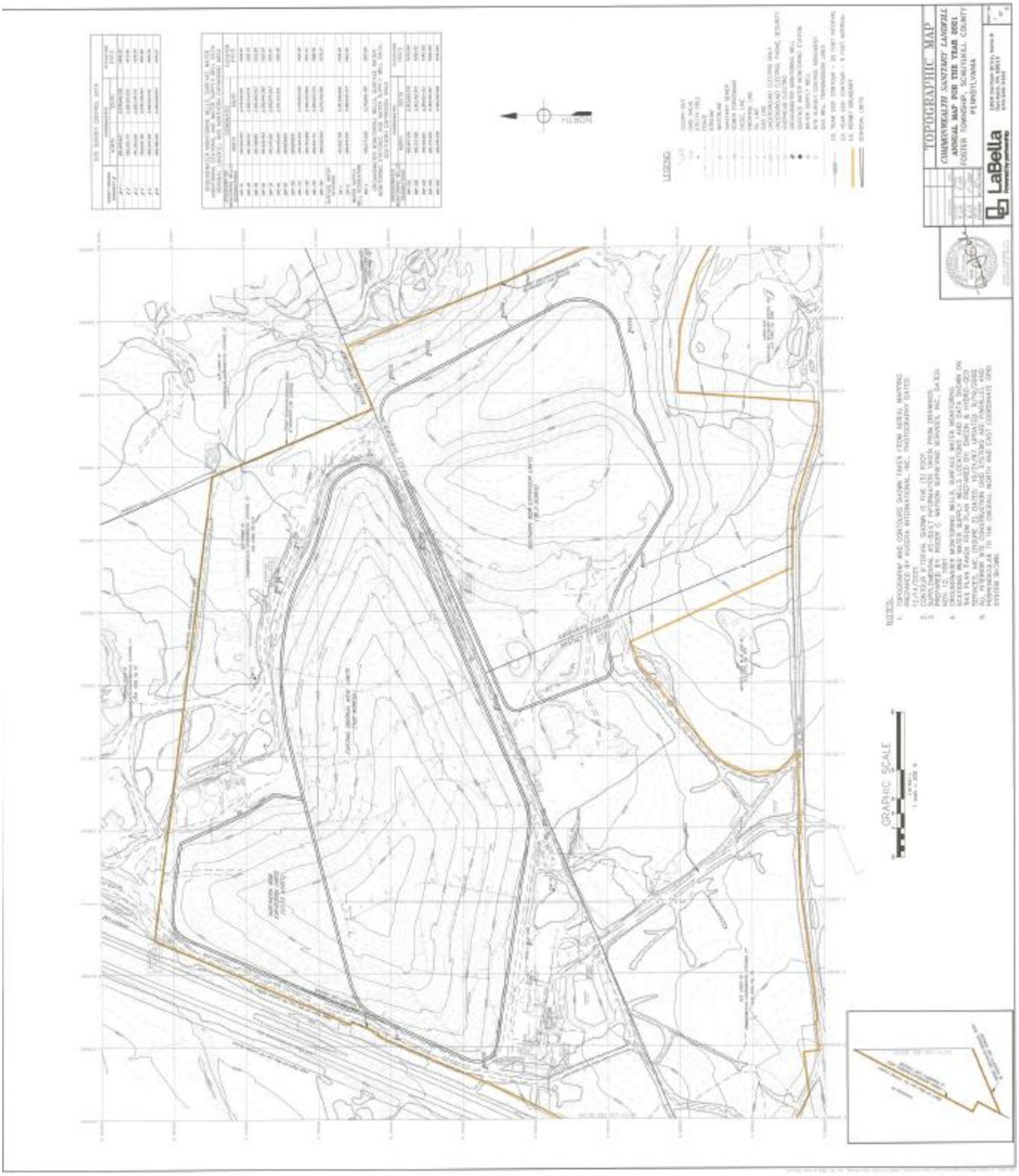
Aerial Photo (with IW Outfall No. 001 on Middle Creek flagged) for overall context:



USGS PA Streamstats Excerpt for Outfall No. 001 location:



2021 MSW Landfill Annual Report Excerpt: This figure shows the MSW Landfill permit boundary (orange line) and breakdown of landfill areas:


TOPOGRAPHIC MAP
COMMONWEALTH SANITARY LANDFILL
ANNUAL MAP FOR THE YEAR 2001
FOSTER TOWNSHIP, SCHUYLKILL COUNTY
PENNSYLVANIA
LaBella
LEGEND
NOTES:
GRAPHIC SCALE

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002, 004, 006	Design Flow (MGD)	0 (stormwater only)
Latitude	40º 40' 35.00" (002) 40º 40' 22.01" (004) 40º 40' 35.57" (006)	Longitude	-76º 21' 57.21" (002) -76º 21' 52.86" (004) -76º 21' 57.15" (006)
Quad Name	Minersville	Quad Code	1335
Wastewater Description:	Stormwater from Sediment Basins 1 (006), 2 (002), and 4 (004)		

Receiving Waters	**Swatara Creek (CWF, MF)**	Stream Code	9361
NHD Com ID	56394487	RMI	-
Drainage Area	1.39 square miles	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	0.139	Q_{7-10} Basis	Statewide LFY default
Elevation (ft)	-	Slope (ft/ft)	-
Watershed No.	7-D	Chapter 93 Class.	CWF, MF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired		
Cause(s) of Impairment	METALS		
Source(s) of Impairment	ACID MINE DRAINAGE		
TMDL Status	Final	Name	Upper Swatara Creek Watershed (metals, pH, TSS)

Background/Ambient Data: NA – stormwater only		Data Source
pH (SU)	-	-
Temperature (°F)	-	-
Hardness (mg/L)	-	-
Other:	-	-

Nearest Downstream Public Water Supply Intake		LEBANON CITY WATER AUTH ID# 101738-001	
PWS Waters	Swatara Creek	Flow at Intake (cfs)	-
PWS RMI	-	Distance from Outfall (mi)	>20 miles

Changes Since Last Permit Issuance: Reclassified as Trout Natural Reproduction Stream.

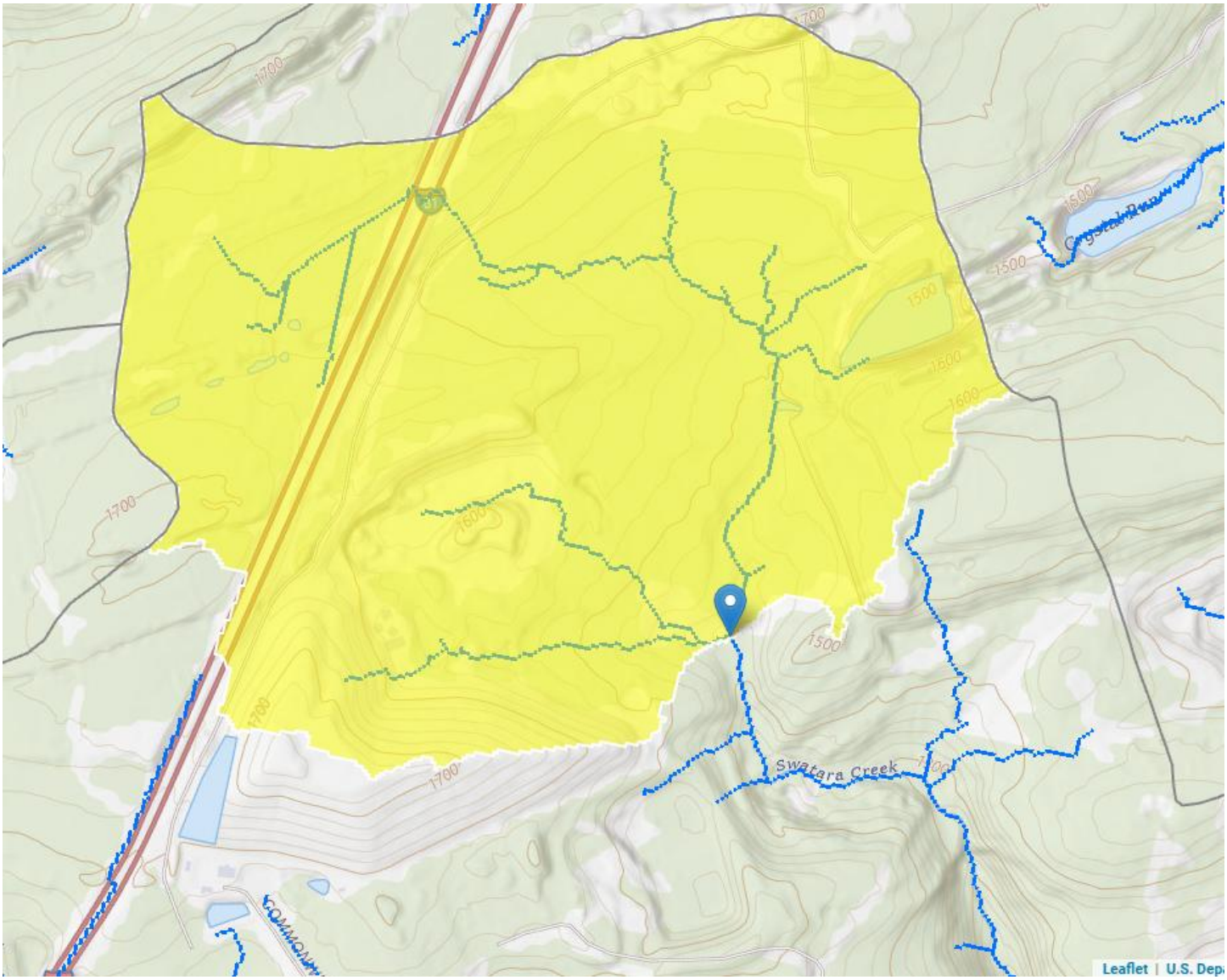
Other Comments:

The entire area is historically mining disturbed. The outfalls are near the headwaters (with mining disturbed areas upslope), with the Orphan AMD seepage draining to Swatara Creek via same drainage channel/intermittent UNT as Sed Basin 1. The stormwater outfalls all drain eastward to Swatara Creek. Basin 1 outlet discharge point (now Outfall 006) drains to an intermittent UNT/channel (with AMD sources) that is not identified as a perennial stream on E-maps. 002 and 004 also discharge eastward to Swatara Creek.

- **Orphan AMD Discharge**: Commonwealth Environmental Systems (CES) Landfill has an onsite orphan AMD discharge (Middle Creek Mine seepage, with 269.4 GPM Final Flow Rate. Monitoring point 199 per E-maps with 155 PPM acidity, 40000 PPB Total Iron, 4.6 SU pH). This discharge flows into the drainage channel/Intermittent UNT to Swatara Creek that receives Sed Basin 1 (Outfall 006) flows. Mining has oversight of the onsite Orphan AMD discharges, with anoxic drain shown on landfill figures. The superseded PAG-03 NOI renewal noted that there is lime treatment is in place for the Orphan AMD discharge.
- **Other Orphan AMD discharges**: On Swatara Creek, there are assorted Orphan AMD discharges downstream of the landfill stormwater outfalls.

Q7-10 low flow: Not relevant to stormwater discharges. Assumed statewide LFY default (0.1 CFS/square mile). PA Streamstats would be biased by downstream AMD discharges and regrading (in addition to being too small an area for the regression equations). Downstream Swatara Creek USGS gage data would be biased by numerous Orphan AMD discharges.

PA Streamstats Excerpt for where drainage area would reach Swatara Creek (Outfalls 006):



Discharge, Receiving Waters and Water Supply Information

Outfall No.	005, 007, 008, 009	Design Flow (MGD)	0 (stormwater only)
Latitude	40º 39' 55.71" (005) 40º 39' 56.18" (007) 40º 39' 56.18" (008) 40º 39' 53.59" (009)	Longitude	-76º 22' 11.01" (005) -76º 22' 20.98" (007) -76º 22' 20.98" (008) -76º 22' 00.33" (009)
Quad Name	Minersville	Quad Code	1335
Wastewater Description:	Stormwater from Sed Basin 5 and two landfill access roads where beneficial use of treated wastewater effluent is being authorized for dust control/mud removal.		

Receiving Waters	**Gebhard Run (CWF, MF) a.k.a. Coal Run downstream**	Stream Code	10084
NHD Com ID	56394471	RMI	~3.5 miles
Drainage Area	0.31 square miles where SR 25 intersects stream	Yield (cfs/mi^2)	-
Q_{7-10} Flow (cfs)	0.031 CFS	Q_{7-10} Basis	-
Elevation (ft)	-	Slope (ft/ft)	-
Watershed No.	7-D	Chapter 93 Class.	CWF, MF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Attaining Use(s) at Outfalls. (E-maps indicates downstream Coal Run reach is impaired for aquatic life due to AMD metals and siltation).		
Cause(s) of Impairment	-		
Source(s) of Impairment	-		
TMDL Status	Final	Name	Upper Swatara Creek Watershed (metals, pH, TSS)

Background/Ambient Data: NA -stormwater only		Data Source
pH (SU)	-	-
Temperature (°F)	-	-
Hardness (mg/L)	-	-
Other:	-	-

Nearest Downstream Public Water Supply Intake		LEBANON CITY WATER AUTH ID# 101738-001	
PWS Waters	Swatara Creek	Flow at Intake (cfs)	-
PWS RMI	-	Distance from Outfall (mi)	>20 miles

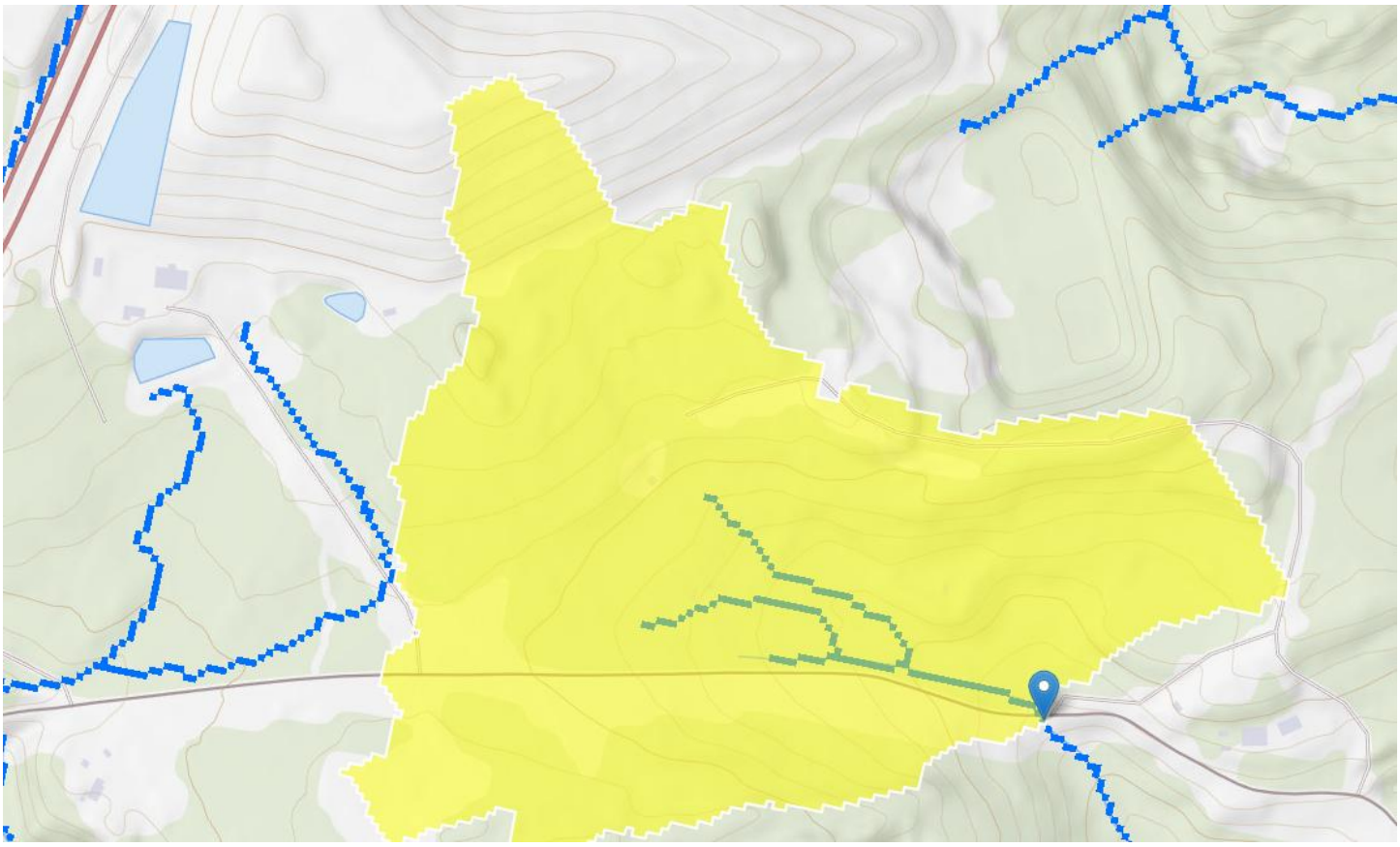
Changes Since Last Permit Issuance: Reclassified as Trout Natural Reproduction Stream

Other Comments:

- The entire area is historically mining disturbed. are near the headwaters, with the stream attaining near the landfill but Orphan AMD impacted downstream. Gebhard Run (a.k.a. Coal Run downstream prior to confluence with Middle Creek) flows into Middle Creek which flows into Swatara Creek.
- Q7-10 low flow: Not relevant to stormwater discharges. Used statewide LFY default (0.1 CFS/square mile). PA Streamstats would be biased by downstream AMD discharges and regrading (in addition to being too small an area for the regression equations). Downstream Swatara Creek USGS gage data would be biased by numerous Orphan AMD discharges.
- Outfalls: The stormwater outfalls drain toward SR-25 and would be directed along SR-25 to Gebhard Run's headwater (where SR 25 crosses stream) per NHD locator.
    - Outfall No. 005: Receives Sediment Basin 5 discharges from disturbed area, including borrow area.

- Outfall Nos. 007, 008, and 009: The facility is located off of I-81 & SR 25 (a.k.a. Shermans Mountain Road) with a site access road (a.k.a. Commonwealth Road) and additional existing adjacent access road (seen on site drawings and aerial photos) that goes to an existing disturbed area (including borrow area) directing runoff to existing Sedimentation Basin 5 (now being incorporated into this permit). As the facility intends to beneficially use treated wastewater for dust control and mud removal, the two access road's intersections have been designated:
  - Outfall No. 007: Commonwealth Road/SR-25 Intersection. Stormwater would drain to head of Gebhards Run per NHD locator.
  - Outfall No. 008: Landfill access road/SR Intersection (adjacent to Commonwealth Road). Stormwater would drain to head of Gebhards Run per NHD locator.
  - Outfall No. 009: Commonwealth Road/SR-25 Intersection. Stormwater would drain to head of Gebhards Run per NHD locator. Commonwealth Road may loop around landfill facility.

PA Streamstats Excerpt for Head of Gebhards Creek:



Treatment Facility Summary

Treatment Facility Name: Comm Environmental System Landfill IWTP a.k.a. Leachate Treatment Plant (LTP)

WQM Permit No.	Issuance Date	Scope
5411403	12/14/2011	A wastewater treatment plant to treat leachate from an existin g municipal solid waste landfill. The treatment system will include: pretreatment utilizing mixing tanks and an inclined plate separator, filtration by filters and cartridge filters, and a two-stage reverse osmosis (RO) membrane treatment system (with a future third stage). The treated effluent will be stream discharged to Middle Creek or reused on-site for dust control, treatment plant make-up water, or other approved uses. See breakdown of permit conditions below. **WQM Special Condition A required reuse sampling** "**after storage but prior to reuse**". Design Figure showed RO Concentrate tank discharging up to 18,000 GPD to storage prior to recirculation (to landfill working face under the MSW Landfill Permit) and/or offsite disposal.

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Industrial & site-generated sanitary sewage	Other Processes (Industrial Waste), Physical (Industrial Waste)	Reuse of Treated Effluent; Reverse Osmosis (RO) treatment (with RO Concentrate recirculation to landfill working face)	No Disinfection (other than RO)	0.090

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.090	Unidentified	NA	None (see below)	Landfilled

Changes Since Last Permit Issuance:

- The Application indicated no modification of the permitted IWTP "that would require submission of a separate WQM or Solid Waste Management Permit Amendment Application. Similarly, there have been no changes to the treatment process that have required submission of an NPDES Permit Part A.III Planned Changes to Physical Facilities notification to PA DEP. The flocculation pre-treatment process has been discontinued; however, the equipment remains onsite, and the tanks are used but flocculation chemicals are no longer added". However, there are known IWTP Changes:
  - Third RO Stage: The 12/13/2017 Inspection Report indicates a third RO Stage has been installed. Also, repurposing tanks requires clarification on their new usage.
  - 2019 Waste Management Permit Amendment for IWTP modifications: The 3/17/2019 MSW Landfill Permit No. 101615-A181 (without corresponding WQM amendment) authorized addition of:
    - Oil/water separator
    - Additional 500,000-gallon Effluent storage tank
    - Rotary fan sludge filter press
  - In June 2025, the membranes in the Reverse Osmosis (RO) treatment system at the LTP were changed to increase the performance efficiency of the system (per application).
  - Other figure showed use of Ferric Chloride wastewater chemical, contrary to NPDES permit application.
  - Renewal Application indicates a pre-flocculation process is not in current use.
- 2025 Figure: Effluent pump station to 1.0 MG Tank was effluent sampling point prior to Reuse or Middle Creek or SCMA, but contrary to WQM permit condition requiring reuse sampling after storage.

Other Comments:

- **IWTP Description:** Leachate generated at the landfill flows to the aerated equalization tanks. It is subsequently pumped to the leachate treatment plant (LTP) for treatment. Treatment steps at the LTP consist of pH adjustment,

flow through primary clarification tanks (note flocculation chemicals are no longer used), filtration via multimedia filters, reverse osmosis (RO) membranes, CO2 removal in air stripping column, ion exchange for removal of trace elements and effluent storage. A high pressure RO membrane system is utilized for concentrate reduction. No IWTP upgrades are proposed for the next five (5) years.

- Wastewater Treatment Chemicals: Sulfuric acid and Caustic Soda Liquid
- Chemical Additives: Rochem Membrane Cleaners AA, B, and C (no analytic method identified)
- Reuse provisions: Treated effluent is stored in a 1,000,000-gallon tank and used as needed for dust control when conditions allow. RO concentrate is stored in two (2) 12,000-gallon tanks. Concentrate is applied to the working face of the landfill or transported to off-site disposal at a certified disposal facility in Ohio

- IWTP: No IWTP upgrades are planned in next five (5) years.
- Treated Wastewater:
  - Landfill Wastewater: The Industrial Wastewater Plant (IWTP, a.k.a. "Leachate Treatment Plant or LTP) treats site-generated Landfill Wastewater (leachate, truck wash water, LFG condensate, etc.). No groundwater remediation flows.
  - Site-generated Sanitary wastewater: Generated at the site is conveyed to the LTP for treatment. Sanitary wastewater generated from toilets and/or sinks located at the office building, guard house, maintenance shop and LTP building is conveyed to the LTP for treatment. Sanitary wastewater flows are shown on Figure 5 - Water Balance included with the NPDES Permit Renewal Application.
- Discharges: The facility has not been discharging via Outfall No. 001 in recent years per EDMR, instead either using fully treated wastewater for beneficial use onsite (dust control primarily) and/or discharging to the SCMA Gordon POTW.
  - Landfill Wastewater Generation Rates: ~0.071 MGD average flows per application.
  - SCMA Gordon POTW Disposal Option: Facility can alternatively discharge pre-treated wastewater to a POTW (0.600 MGD SCMA Gordon POTW, NPDES Permit# PA0062201, Butler Township, Schuylkill County), but it is unclear if the POTW has committed the capacity needed to handle the average landfill leachate generation rates. Per 2024 SCMA Gordon Chapter 94 Report:
    - In December 1991, CES Landfill completed construction of its conveyance system to connect to the SCMA Gordon's Pump Station A (300 GPM, 0.432 MGD), under its own permit per the 2024 SCMA Gordon Chapter 94 Report. The landfill is permitted to discharge approximately **30,000 GPD** of pre-treated leachate to **Pump Station A**. The Chapter 94 Report indicated that SCMA Gordon was a **back-up mode of disposal** in event that CES is not able to discharge under its own NPDES Permit. **The SCMA organic loading projections assumed elimination of CES landfill loadings**. The Report noted that SCMA has adopted discharge limitations and monitoring requirements, but it is unclear if any monitoring & reporting is being done if no CES wastewater is being directed to SCMA Gordon. The Report noted that CES Landfill has its own CES Landfill Pumping Station.
    - 2/16/2024 Act 537 Planning letter for the 0.600 MGD SCMA Gordon POTW, NPDES Permit# PA0062201, Butler Township, Schuylkill County) indicated Act 537 Plan including rerating to 1.5 MGD. It is unclear if SCMA Gordon has current available capacity to accept >30,000 GPD landfill wastewater.
- **MSW Landfill Permit Application Information**: The facility also operates under MSW Landfill Permit No. 101615, which has overlapping leachate management requirements; an approved MSW Landfill groundwater monitoring system with surface water monitoring points (overlapping in terms of dust control beneficial reuse monitoring); and E&S Control Plan (stormwater-related). Site-generated sludge is disposed onsite under the MSW landfill permit. The Leachate Management System was shown to include two (2) 1.5-MG Untreated Leachate Storage tanks directing wastewater to the IWTP, the IWTP treatment process, and one (1) Effluent Storage Tank, with separate RO Concentrate storage tanks. The facility recirculates up to ~18,000 GPD Reverse Osmosis (RO) Concentrate (from IWTP) via the lined landfill working face under the MSW Landfill permit and/or ships it offsite for disposal.
- **NPDES Application Form IWTP Description:** Leachate generated at the landfill flows to the aerated equalization tanks. It is subsequently pumped to the leachate treatment plant (LTP) for treatment. Treatment steps at the LTP consist of pH adjustment, flow through primary clarification tanks (note flocculation chemicals are no longer used), filtration via multimedia filters, reverse osmosis (RO) membranes, CO2 removal in air stripping column, ion exchange for removal of trace elements and effluent storage. A high pressure RO membrane system is utilized for concentrate reduction. No IWTP upgrades are proposed for the next five (5) years.
  - **Wastewater Treatment Chemicals**: Sulfuric acid and Caustic Soda Liquid
  - **Chemical Additives**: Rochem Membrane Cleaners AA, B, and C (no analytic method identified)

- **Reuse provisions**: Treated effluent is stored in a 1,000,000-gallon tank and used as needed for dust control when conditions allow. RO concentrate is stored in two (2) 12,000-gallon tanks. Concentrate is applied to the working face of the landfill or transported to off-site disposal at a certified disposal facility in Ohio

- **Per 11/7/2016 Draft NPDES Permit Fact Sheet**: This is a 235-acre MSW landfill. Leachate generated by the landfill is conveyed to two (2) 1.5 MG aerated storage tanks located by the Leachate Treatment Plant (LTP a.k.a. IWTP). Leachate form the storage tanks are pumped to the 90,000 GPD LTP for treatment by the following processes:
  - Equalization in aerated storage tanks
  - Primary clarification and pH adjustment
  - Filtration through multi-media filters
  - Two-stage Reverse Osmosis (RO) treatment process
  - High pressure Reverse Osmosis (RO) Treatment for concentrated volume reduction
  - Carbon dioxide removal using air stripping column
  - Ion exchange for copper removal **(if needed)**
  - Zeolite treatment for ammonia reduction **(if needed)**
  - Effluent storage (1.0 MG storage tank), followed by beneficial use (dust control, leachate treatment plant water) or discharge to POTW or stream discharge. Narrative mentioned foam make-up water but it was not approved by itself and is of unclear meaning (i.e. cannot be approved without additional information & clarification).
  - RO Concentrate is either recirculated onto the landfill liner system or offsite disposal. Solids are landfilled.
- **Applicable WQM Permit (IWTP and beneficial use of Reverse Osmosis-treated Wastewater)**: This facility is also operating under the December 14, 2011 Part II WQM Permit No. 5411403 in terms of the IWTP (a.k.a. Leachate Treatment Plant) and beneficial use of treated wastewater onsite (dust control; IWTP plant water; etc.). This permit authorized the IWTP to treat leachate (and other landfill wastewater) via the WQM Permit-defined treatment system (mixing tanks for pre-treatment; inclined plate separator' filtration by sand filters and cartridge filters; and a two-stage Reverse Osmosis (RO) System with authorization for a third stage)) for either discharge to Middle Creek and/or reuse onsite for "dust control, treatment plant make-up water, or other approved uses". The hydraulic capacity of the IWTP was identified as 0.090 MGD. Applicable WQM Permit conditions:
  - **Standard Condition E.1 (all operations and procedures shall be in accordance with the WQM permit application)**:
    - The Application Module 1 stated: "Effluent proposed for reuse will meet NPDES limits".
    - The Design Engineer Report stated:
      - "Based on the current usage, CES will be able to utilize nearly all of the treated effluent on site for dust control and at the treatment plant, particularly from March to October".
      - "Water is applied when required for dust control". … "**When conditions do not require effluent application onto the roadways for dust control, CES will discharge treated effluent to Middle Creek or to the SCMA Gordon sewage treatment plant**. Effluent may still be used for process water in the treatment outfall".
  - **Standard Condition 6:** This condition explicitly incorporated by reference all requirements of NPDES Permit No. PA0065307, including all subsequent amendments and renewals.
  - **Special Condition A:** This condition included minimum sampling and analysis requirements for the treated effluent prior to beneficial use (BOD5, TSS, and Fecal Coliform indicator constituents), with onsite record-keeping. Please note that these were indicator sampling requirements for fully treated wastewater that otherwise was expected to meet the NPDES Permit limits after being fully treated by the IWTP.
  - **Special Condition B:** The permittee was allowed to request approval for other beneficial uses but any uses required written Department approval. **NOTE**: The WQM Permit application explicitly listed use of treated effluent for daily foam cover water, IWTP plant water, and roadway dust control (on and off lined landfill areas).
  - **Special Condition C:** Monitoring and reporting of monthly flow quantities required.
  - **Special Condition D:** Installation and operation of an ion exchange column (if necessary to reduce permeate copper levels to achieve the effluent limits for Total Copper in NPDES Permit No. PA0065307).

Compliance History

PA0065307 EDMR Data: No discharges to IW Outfall No. 001 in recent years. Previous discharges in three months of 2018 time-frame. Therefore, no IW Outfall No. 001 EDMR data is available for the last 12 months. See Effluent Limits section for summarized 2018 EDMR data.

PAR502208 EDMR Data: IW Stormwater monitoring under the IW Stormwater General Permit PAG-03.

DMR Data for Outfall 001 (from July 1, 2024 to June 30, 2025) – Please note that this outfall is NOT the IW Outfall No. 001 (and being redesignated 006), and discharges to Swatara Creek.

Parameter	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24
pH (S.U.) Daily Maximum	6.15						6.83					
COD (mg/L) Daily Maximum	< 20.0						< 20.0					
TSS (mg/L) Daily Maximum	< 5						< 5.0					
Total Nitrogen (mg/L) Daily Maximum	0.65						0.63					
Ammonia (mg/L) Daily Maximum	0.377						0.360					
Total Phosphorus (mg/L) Daily Maximum	< 0.1						< 0.1					
Total Iron (mg/L) Daily Maximum	**10.4**						**11.3**					

DMR Data for Outfall 002 (from July 1, 2024 to June 30, 2025)

Parameter	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24
pH (S.U.) Daily Maximum	6.05						6.06					
COD (mg/L) Daily Maximum	44.0						< 20.0					
TSS (mg/L) Daily Maximum	58.0						< 5					
Total Nitrogen (mg/L) Daily Maximum	1.23						0.57					
Ammonia (mg/L) Daily Maximum	< 2.00						< 0.2					

Total Phosphorus (mg/L) Daily Maximum	0.202						< 0.1					
Total Iron (mg/L) Daily Maximum	2.46						0.422					

DMR Data for Outfall 003 (from July 1, 2024 to June 30, 2025)

Parameter	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24
pH (S.U.) Daily Maximum	6.79						7.12					
COD (mg/L) Daily Maximum	< 20.0						< 20.0					
TSS (mg/L) Daily Maximum	< 5						9.7					
Total Nitrogen (mg/L) Daily Maximum	0.62						0.68					
Ammonia (mg/L) Daily Maximum	< 0.2						< 0.2					
Total Phosphorus (mg/L) Daily Maximum	< 0.1						< 0.1					
Total Iron (mg/L) Daily Maximum	1.10						0.616					

Other Available EDMR data (PAR502208): Bolded benchmark exceedances and Total Iron concentrations >4 greater than 1.5 mg/l Chapter 93 WQS. Stormwater Outfall No. 001 (stormwater, being converted to Outfall 006) low pH values also would have been permit limit exceedances if discharged via IW Outfall No. 001. In practical terms, the Outfall No. 001 is contributing to the Swatara Creek AMD impairment due to high iron and low pH.

MONITORING START DATE	DMR VERSION 1 LATE IND	OUTFALL	DISCHARGE	PARAMETER	CONC UNITS	CONC 3 VALUE
07/01/2017	No	001	Yes	Ammonia-Nitrogen	mg/L	4.00
07/01/2017	No	002	Yes	Ammonia-Nitrogen	mg/L	0.20
07/01/2017	No	003	Yes	Ammonia-Nitrogen	mg/L	1.43
07/01/2017		001	Yes	Ammonia-Nitrogen	mg/L	1.41
07/01/2017		002	Yes	Ammonia-Nitrogen	mg/L	< 0.2
07/01/2017		003	Yes	Ammonia-Nitrogen	mg/L	0.90
01/01/2018	No	001	Yes	Ammonia-Nitrogen	mg/L	2.57
01/01/2018	No	002	Yes	Ammonia-Nitrogen	mg/L	< 0.2

01/01/2018	No	003	Yes	Ammonia-Nitrogen	mg/L	0.50
07/01/2018	Yes	001	Yes	Ammonia-Nitrogen	mg/L	1.46
07/01/2018	Yes	002	Yes	Ammonia-Nitrogen	mg/L	< 0.2
07/01/2018	Yes	003	Yes	Ammonia-Nitrogen	mg/L	0.6
01/01/2019	No	001	Yes	Ammonia-Nitrogen	mg/L	0.89
01/01/2019	No	002	Yes	Ammonia-Nitrogen	mg/L	< 0.2
01/01/2019	No	003	Yes	Ammonia-Nitrogen	mg/L	0.31
07/01/2019	No	001	Yes	Ammonia-Nitrogen	mg/L	0.771
07/01/2019	No	002	Yes	Ammonia-Nitrogen	mg/L	0.547
07/01/2019	No	003	Yes	Ammonia-Nitrogen	mg/L	0.970
01/01/2020	No	001	Yes	Ammonia-Nitrogen	mg/L	0.813
01/01/2020	No	002	Yes	Ammonia-Nitrogen	mg/L	< 0.2
01/01/2020	No	003	Yes	Ammonia-Nitrogen	mg/L	0.265
07/01/2020	No	001	Yes	Ammonia-Nitrogen	mg/L	0.604
07/01/2020	No	002	Yes	Ammonia-Nitrogen	mg/L	< 0.2
07/01/2020	No	003	Yes	Ammonia-Nitrogen	mg/L	5.19
01/01/2021	No	001	Yes	Ammonia-Nitrogen	mg/L	0.564
01/01/2021	No	002	Yes	Ammonia-Nitrogen	mg/L	< 0.2
01/01/2021	No	003	Yes	Ammonia-Nitrogen	mg/L	< 0.2
07/01/2021	No	001	Yes	Ammonia-Nitrogen	mg/L	0.289
07/01/2021	No	002	Yes	Ammonia-Nitrogen	mg/L	< 0.2
07/01/2021	No	003	Yes	Ammonia-Nitrogen	mg/L	< 0.2
01/01/2022	No	001	Yes	Ammonia-Nitrogen	mg/L	0.637
01/01/2022	No	002	Yes	Ammonia-Nitrogen	mg/L	< 0.2
01/01/2022	No	003	Yes	Ammonia-Nitrogen	mg/L	0.420
07/01/2022	No	001	Yes	Ammonia-Nitrogen	mg/L	0.957
07/01/2022	No	002	Yes	Ammonia-Nitrogen	mg/L	< 0.2
07/01/2022	No	003	Yes	Ammonia-Nitrogen	mg/L	< 0.2
01/01/2023	No	001	Yes	Ammonia-Nitrogen	mg/L	0.485
01/01/2023	No	002	Yes	Ammonia-Nitrogen	mg/L	< 0.2
01/01/2023	No	003	Yes	Ammonia-Nitrogen	mg/L	< 0.2
07/01/2023	No	001	Yes	Ammonia-Nitrogen	mg/L	0.566

07/01/2023	No	002	Yes	Ammonia-Nitrogen	mg/L	< 0.2
07/01/2023	No	003	Yes	Ammonia-Nitrogen	mg/L	< 0.400
01/01/2024	No	001	Yes	Ammonia-Nitrogen	mg/L	0.360
01/01/2024	No	002	Yes	Ammonia-Nitrogen	mg/L	< 0.400
01/01/2024	No	003	Yes	Ammonia-Nitrogen	mg/L	< 0.2
07/01/2024	No	001	Yes	Ammonia-Nitrogen	mg/L	0.360
07/01/2024	No	002	Yes	Ammonia-Nitrogen	mg/L	< 0.2
07/01/2024	No	003	Yes	Ammonia-Nitrogen	mg/L	< 0.2
01/01/2025	No	001	Yes	Ammonia-Nitrogen	mg/L	0.377
01/01/2025	No	002	Yes	Ammonia-Nitrogen	mg/L	< 2.00
01/01/2025	No	003	Yes	Ammonia-Nitrogen	mg/L	< 0.2
07/01/2017	No	001	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
07/01/2017	No	002	Yes	Chemical Oxygen Demand (COD)	mg/L	22.1
07/01/2017	No	003	Yes	Chemical Oxygen Demand (COD)	mg/L	28.5
07/01/2017		001	Yes	Chemical Oxygen Demand (COD)	mg/L	50.0
07/01/2017		002	Yes	Chemical Oxygen Demand (COD)	mg/L	71.6
07/01/2017		003	Yes	Chemical Oxygen Demand (COD)	mg/L	36.8
01/01/2018	No	001	Yes	Chemical Oxygen Demand (COD)	mg/L	97.3
01/01/2018	No	002	Yes	Chemical Oxygen Demand (COD)	mg/L	21.1
01/01/2018	No	003	Yes	Chemical Oxygen Demand (COD)	mg/L	51.9
07/01/2018	Yes	001	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
07/01/2018	Yes	002	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
07/01/2018	Yes	003	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
01/01/2019	No	001	Yes	Chemical Oxygen Demand (COD)	mg/L	34.2
01/01/2019	No	002	Yes	Chemical Oxygen Demand (COD)	mg/L	27.9
01/01/2019	No	003	Yes	Chemical Oxygen Demand (COD)	mg/L	23.7
07/01/2019	No	001	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20
07/01/2019	No	002	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20
07/01/2019	No	003	Yes	Chemical Oxygen Demand (COD)	mg/L	25.1
01/01/2020	No	001	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20
01/01/2020	No	002	Yes	Chemical Oxygen Demand (COD)	mg/L	22.1
01/01/2020	No	003	Yes	Chemical Oxygen Demand (COD)	mg/L	49.7

07/01/2020	No	001	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20
07/01/2020	No	002	Yes	Chemical Oxygen Demand (COD)	mg/L	118
07/01/2020	No	003	Yes	Chemical Oxygen Demand (COD)	mg/L	55.5
01/01/2021	No	001	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
01/01/2021	No	002	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
01/01/2021	No	003	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
07/01/2021	No	001	Yes	Chemical Oxygen Demand (COD)	mg/L	21.4
07/01/2021	No	002	Yes	Chemical Oxygen Demand (COD)	mg/L	21.5
07/01/2021	No	003	Yes	Chemical Oxygen Demand (COD)	mg/L	26.2
01/01/2022	No	001	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20
01/01/2022	No	002	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20
01/01/2022	No	003	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20
07/01/2022	No	001	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
07/01/2022	No	002	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
07/01/2022	No	003	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
01/01/2023	No	001	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
01/01/2023	No	002	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
01/01/2023	No	003	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
07/01/2023	No	001	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
07/01/2023	No	002	Yes	Chemical Oxygen Demand (COD)	mg/L	37.0
07/01/2023	No	003	Yes	Chemical Oxygen Demand (COD)	mg/L	83.5
01/01/2024	No	001	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
01/01/2024	No	002	Yes	Chemical Oxygen Demand (COD)	mg/L	27.2
01/01/2024	No	003	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
07/01/2024	No	001	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
07/01/2024	No	002	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
07/01/2024	No	003	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
01/01/2025	No	001	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
01/01/2025	No	002	Yes	Chemical Oxygen Demand (COD)	mg/L	44.0
01/01/2025	No	003	Yes	Chemical Oxygen Demand (COD)	mg/L	< 20.0
07/01/2017	**No**	**001**	**Yes**	**Iron, Total**	**mg/L**	**23.2**
07/01/2017	No	002	Yes	Iron, Total	mg/L	0.501

07/01/2017	No	003	Yes	Iron, Total	mg/L	1.41
07/01/2017		**001**	**Yes**	**Iron, Total**	**mg/L**	**10.6**
07/01/2017		002	Yes	Iron, Total	mg/L	4.20
07/01/2017		003	Yes	Iron, Total	mg/L	2.30
01/01/2018	**No**	**001**	**Yes**	**Iron, Total**	**mg/L**	**13.7**
01/01/2018	No	002	Yes	Iron, Total	mg/L	0.235
01/01/2018	No	003	Yes	Iron, Total	mg/L	4.23
07/01/2018	**Yes**	**001**	**Yes**	**Iron, Total**	**mg/L**	**18.3**
07/01/2018	Yes	002	Yes	Iron, Total	mg/L	1.64
07/01/2018	Yes	003	Yes	Iron, Total	mg/L	4.96
01/01/2019	No	001	Yes	Iron, Total	mg/L	13.7
01/01/2019	No	002	Yes	Iron, Total	mg/L	1.70
01/01/2019	No	003	Yes	Iron, Total	mg/L	3.05
07/01/2019	**No**	**001**	**Yes**	**Iron, Total**	**mg/L**	**15.9**
07/01/2019	No	002	Yes	Iron, Total	mg/L	0.947
07/01/2019	No	003	Yes	Iron, Total	mg/L	1.69
01/01/2020	No	001	Yes	Iron, Total	mg/L	3.73
01/01/2020	No	002	Yes	Iron, Total	mg/L	0.449
01/01/2020	No	003	Yes	Iron, Total	mg/L	2.37
07/01/2020	**No**	**001**	**Yes**	**Iron, Total**	**mg/L**	**19.3**
07/01/2020	No	002	Yes	Iron, Total	mg/L	0.737
07/01/2020	No	003	Yes	Iron, Total	mg/L	2.69
01/01/2021	**No**	**001**	**Yes**	**Iron, Total**	**mg/L**	**10.9**
01/01/2021	No	002	Yes	Iron, Total	mg/L	0.356
01/01/2021	No	003	Yes	Iron, Total	mg/L	2.61
07/01/2021	**No**	**001**	**Yes**	**Iron, Total**	**mg/L**	**8.90**
07/01/2021	No	002	Yes	Iron, Total	mg/L	0.482
07/01/2021	No	003	Yes	Iron, Total	mg/L	0.966
01/01/2022	**No**	**001**	**Yes**	**Iron, Total**	**mg/L**	**14.3**
01/01/2022	No	002	Yes	Iron, Total	mg/L	0.362
01/01/2022	No	003	Yes	Iron, Total	mg/L	0.430
07/01/2022	**No**	**001**	**Yes**	**Iron, Total**	**mg/L**	**17.4**

07/01/2022	No	002	Yes	Iron, Total	mg/L	0.371
07/01/2022	No	003	Yes	Iron, Total	mg/L	0.557
01/01/2023	**No**	**001**	**Yes**	**Iron, Total**	**mg/L**	**13.9**
01/01/2023	No	002	Yes	Iron, Total	mg/L	0.236
01/01/2023	No	003	Yes	Iron, Total	mg/L	1.94
07/01/2023	**No**	**001**	**Yes**	**Iron, Total**	**mg/L**	**12.4**
07/01/2023	No	002	Yes	Iron, Total	mg/L	2.22
07/01/2023	No	003	Yes	Iron, Total	mg/L	5.41
01/01/2024	**No**	**001**	**Yes**	**Iron, Total**	**mg/L**	**9.60**
01/01/2024	No	002	Yes	Iron, Total	mg/L	1.05
01/01/2024	No	003	Yes	Iron, Total	mg/L	1.59
07/01/2024	**No**	**001**	**Yes**	**Iron, Total**	**mg/L**	**11.3**
07/01/2024	No	002	Yes	Iron, Total	mg/L	0.422
07/01/2024	No	003	Yes	Iron, Total	mg/L	0.616
01/01/2025	**No**	**001**	**Yes**	**Iron, Total**	**mg/L**	**10.4**
01/01/2025	No	002	Yes	Iron, Total	mg/L	2.46
01/01/2025	No	003	Yes	Iron, Total	mg/L	1.10
07/01/2017	No	001	Yes	pH	S.U.	6.42
07/01/2017	No	002	Yes	pH	S.U.	6.61
07/01/2017	No	003	Yes	pH	S.U.	7.21
07/01/2017		001	Yes	pH	S.U.	6.35
07/01/2017		002	Yes	pH	S.U.	7.03
07/01/2017		003	Yes	pH	S.U.	7.04
01/01/2018	No	001	Yes	pH	S.U.	6.58
01/01/2018	No	002	Yes	pH	S.U.	6.88
01/01/2018	No	003	Yes	pH	S.U.	6.74
07/01/2018	Yes	001	Yes	pH	S.U.	6.23
07/01/2018	Yes	002	Yes	pH	S.U.	6.62
07/01/2018	Yes	003	Yes	pH	S.U.	6.49
01/01/2019	No	001	Yes	pH	S.U.	6.48
01/01/2019	No	002	Yes	pH	S.U.	8.09
01/01/2019	No	003	Yes	pH	S.U.	8.14

07/01/2019	No	001	Yes	pH	S.U.	6.13
07/01/2019	No	002	Yes	pH	S.U.	6.71
07/01/2019	No	003	Yes	pH	S.U.	6.70
01/01/2020	**No**	**001**	**Yes**	**pH**	**S.U.**	**5.01**
01/01/2020	No	002	Yes	pH	S.U.	6.31
01/01/2020	No	003	Yes	pH	S.U.	6.46
07/01/2020	No	001	Yes	pH	S.U.	6.61
07/01/2020	No	002	Yes	pH	S.U.	6.43
07/01/2020	No	003	Yes	pH	S.U.	6.87
01/01/2021	**No**	**001**	**Yes**	**pH**	**S.U.**	**5.75**
01/01/2021	**No**	**002**	**Yes**	**pH**	**S.U.**	**5.95**
01/01/2021	No	003	Yes	pH	S.U.	6.53
07/01/2021	**No**	**001**	**Yes**	**pH**	**S.U.**	**5.92**
07/01/2021	**No**	**002**	**Yes**	**pH**	**S.U.**	**5.84**
07/01/2021	No	003	Yes	pH	S.U.	6.57
01/01/2022	No	001	Yes	pH	S.U.	6.33
01/01/2022	No	002	Yes	pH	S.U.	6.67
01/01/2022	No	003	Yes	pH	S.U.	6.71
07/01/2022	No	001	Yes	pH	S.U.	6.01
07/01/2022	No	002	Yes	pH	S.U.	6.32
07/01/2022	No	003	Yes	pH	S.U.	6.97
01/01/2023	**No**	**001**	**Yes**	**pH**	**S.U.**	**5.70**
01/01/2023	No	002	Yes	pH	S.U.	6.11
01/01/2023	No	003	Yes	pH	S.U.	6.60
07/01/2023	No	001	Yes	pH	S.U.	5.53
07/01/2023	No	002	Yes	pH	S.U.	6.50
07/01/2023	No	003	Yes	pH	S.U.	6.60
01/01/2024	**No**	**001**	**Yes**	**pH**	**S.U.**	**5.77**
01/01/2024	No	002	Yes	pH	S.U.	6.28
01/01/2024	No	003	Yes	pH	S.U.	6.49
07/01/2024	No	001	Yes	pH	S.U.	6.83
07/01/2024	No	002	Yes	pH	S.U.	6.06

07/01/2024	No	003	Yes	pH	S.U.	7.12
01/01/2025	No	001	Yes	pH	S.U.	6.15
01/01/2025	No	002	Yes	pH	S.U.	6.05
01/01/2025	No	003	Yes	pH	S.U.	6.79
07/01/2023	No	001	Yes	Total Nitrogen	mg/L	0.89
07/01/2023	No	002	Yes	Total Nitrogen	mg/L	1.94
07/01/2023	No	003	Yes	Total Nitrogen	mg/L	< 4.96
01/01/2024	No	001	Yes	Total Nitrogen	mg/L	1.17
01/01/2024	No	002	Yes	Total Nitrogen	mg/L	1.46
01/01/2024	No	003	Yes	Total Nitrogen	mg/L	1.08
07/01/2024	No	001	Yes	Total Nitrogen	mg/L	0.63
07/01/2024	No	002	Yes	Total Nitrogen	mg/L	0.57
07/01/2024	No	003	Yes	Total Nitrogen	mg/L	0.68
01/01/2025	No	001	Yes	Total Nitrogen	mg/L	0.65
01/01/2025	No	002	Yes	Total Nitrogen	mg/L	1.23
01/01/2025	No	003	Yes	Total Nitrogen	mg/L	0.62
07/01/2023	No	001	Yes	Total Phosphorus	mg/L	< 0.1
07/01/2023	No	002	Yes	Total Phosphorus	mg/L	< 0.2
07/01/2023	No	003	Yes	Total Phosphorus	mg/L	0.342
01/01/2024	No	001	Yes	Total Phosphorus	mg/L	< 0.1
01/01/2024	No	002	Yes	Total Phosphorus	mg/L	< 0.1
01/01/2024	No	003	Yes	Total Phosphorus	mg/L	< 0.1
07/01/2024	No	001	Yes	Total Phosphorus	mg/L	< 0.1
07/01/2024	No	002	Yes	Total Phosphorus	mg/L	< 0.1
07/01/2024	No	003	Yes	Total Phosphorus	mg/L	< 0.1
01/01/2025	No	001	Yes	Total Phosphorus	mg/L	< 0.1
01/01/2025	No	002	Yes	Total Phosphorus	mg/L	0.202
01/01/2025	No	003	Yes	Total Phosphorus	mg/L	< 0.1
07/01/2017	No	001	Yes	Total Suspended Solids	mg/L	< 5
07/01/2017	No	002	Yes	Total Suspended Solids	mg/L	16
07/01/2017	No	003	Yes	Total Suspended Solids	mg/L	5.7
07/01/2017		001	Yes	Total Suspended Solids	mg/L	73

07/01/2017		**002**	**Yes**	**Total Suspended Solids**	**mg/L**	**180**
07/01/2017		003	Yes	Total Suspended Solids	mg/L	61
01/01/2018	**No**	**001**	**Yes**	**Total Suspended Solids**	**mg/L**	**230**
01/01/2018	No	002	Yes	Total Suspended Solids	mg/L	6.8
01/01/2018	**No**	**003**	**Yes**	**Total Suspended Solids**	**mg/L**	**160**
07/01/2018	**Yes**	**001**	**Yes**	**Total Suspended Solids**	**mg/L**	**130**
07/01/2018	Yes	002	Yes	Total Suspended Solids	mg/L	31
07/01/2018	**Yes**	**003**	**Yes**	**Total Suspended Solids**	**mg/L**	**150**
01/01/2019	No	001	Yes	Total Suspended Solids	mg/L	62
01/01/2019	No	002	Yes	Total Suspended Solids	mg/L	30
01/01/2019	No	003	Yes	Total Suspended Solids	mg/L	78
07/01/2019	No	001	Yes	Total Suspended Solids	mg/L	50
07/01/2019	No	002	Yes	Total Suspended Solids	mg/L	20
07/01/2019	No	003	Yes	Total Suspended Solids	mg/L	25
01/01/2020	No	001	Yes	Total Suspended Solids	mg/L	< 5
01/01/2020	No	002	Yes	Total Suspended Solids	mg/L	20
01/01/2020	No	003	Yes	Total Suspended Solids	mg/L	78
07/01/2020	No	001	Yes	Total Suspended Solids	mg/L	5.4
07/01/2020	No	002	Yes	Total Suspended Solids	mg/L	18
07/01/2020	No	003	Yes	Total Suspended Solids	mg/L	31
01/01/2021	No	001	Yes	Total Suspended Solids	mg/L	7.1
01/01/2021	No	002	Yes	Total Suspended Solids	mg/L	15.0
01/01/2021	No	003	Yes	Total Suspended Solids	mg/L	7.6
07/01/2021	No	001	Yes	Total Suspended Solids	mg/L	12.3
07/01/2021	No	002	Yes	Total Suspended Solids	mg/L	12.8
07/01/2021	No	003	Yes	Total Suspended Solids	mg/L	17.2
01/01/2022	No	001	Yes	Total Suspended Solids	mg/L	< 5
01/01/2022	No	002	Yes	Total Suspended Solids	mg/L	9.2
01/01/2022	No	003	Yes	Total Suspended Solids	mg/L	5.6
07/01/2022	No	001	Yes	Total Suspended Solids	mg/L	< 5
07/01/2022	No	002	Yes	Total Suspended Solids	mg/L	5.6
07/01/2022	No	003	Yes	Total Suspended Solids	mg/L	6.2

01/01/2023	No	001	Yes	Total Suspended Solids	mg/L	< 5
01/01/2023	No	002	Yes	Total Suspended Solids	mg/L	< 5
01/01/2023	No	003	Yes	Total Suspended Solids	mg/L	29.0
07/01/2023	No	001	Yes	Total Suspended Solids	mg/L	6.6
07/01/2023	No	002	Yes	Total Suspended Solids	mg/L	52.0
07/01/2023	**No**	**003**	**Yes**	**Total Suspended Solids**	**mg/L**	**212.0**
01/01/2024	No	001	Yes	Total Suspended Solids	mg/L	8.8
01/01/2024	No	002	Yes	Total Suspended Solids	mg/L	44.5
01/01/2024	No	003	Yes	Total Suspended Solids	mg/L	34.5
07/01/2024	No	001	Yes	Total Suspended Solids	mg/L	< 5.0
07/01/2024	No	002	Yes	Total Suspended Solids	mg/L	< 5
07/01/2024	No	003	Yes	Total Suspended Solids	mg/L	9.7
01/01/2025	No	001	Yes	Total Suspended Solids	mg/L	< 5
01/01/2025	No	002	Yes	Total Suspended Solids	mg/L	58.0
01/01/2025	No	003	Yes	Total Suspended Solids	mg/L	< 5

Inspection Reports:

PA0065307:

FACILITY NAME	INSP PROGRAM	PF TYPE	INSP ID	INSPECTED DATE	INSP TYPE	INSPECTION RESULT DESC	INSPECTOR ID	# OF VIOLATIONS
COMM ENV SYS LANDFILL	WPCNP	Water Pollution Control Facility	3542179	02/10/2025	Compliance Evaluation	No Violations Noted	00531359	0
COMM ENV SYS LANDFILL	WPCNP	Water Pollution Control Facility	2671772	04/20/2023	Compliance Evaluation	No Violations Noted	00531359	0
COMM ENV SYS LANDFILL	WPCNP	Water Pollution Control Facility	3924942	12/13/2017	Administrative/File Review	Violation(s) Noted	00816308	1

PAR502208:

FACILITY NAME	INSP PROGRAM	PF TYPE	INSP ID	INSPECTED DATE	INSP TYPE	INSPECTION RESULT DESC	# OF VIOLATIONS
COMM ENV SYS	WPCNP	Water Pollution Control Facility	3364462	05/19/2022	Administrative/File Review	No Violations Noted	0

COMM ENV SYS	WPCNP	Water Pollution Control Facility	2671620	07/13/2021	Compliance Evaluation	No Violations Noted	0
COMM ENV SYS	WPCNP	Water Pollution Control Facility	2902940	09/14/2020	Routine/Partial Inspection	No Violations Noted	0
COMM ENV SYS	WPCNP	Water Pollution Control Facility	2746815	08/10/2020	Routine/Partial Inspection	No Violations Noted	0
COMM ENV SYS	WPCNP	Water Pollution Control Facility	3218181	07/08/2019	Administrative/File Review	No Violations Noted	0
COMM ENV SYS	WPCNP	Water Pollution Control Facility	2869663	04/10/2019	Compliance Evaluation	No Violations Noted	0
COMM ENV SYS	WPCNP	Water Pollution Control Facility	3079225	06/28/2018	Routine/Partial Inspection	Viol(s) Noted & Immediately Corrected	1
COMM ENV SYS	WPCNP	Water Pollution Control Facility	3066551	12/13/2017	Routine/Partial Inspection	No Violations Noted	0
COMM ENV SYS	WPCNP	Water Pollution Control Facility	2620415	07/31/2017	Routine/Partial Inspection	No Violations Noted	0

Other Comments:

- **Apparent Unauthorized Discharge to Wrong Outfall/Stream**:
  - **Facility had two different Outfall Nos. 001:**
    - Stormwater-only PAG-03 Outfall No. 001 is for Basin No. 1 stormwater discharges to Swatara Creek. The PAG-03 permit is for stormwater only, and did not authorize any IW discharge. However, it appears unauthorized treated effluent was discharged to this Stormwater Outfall No. 001 (being redesignated Outfall No. 006 in this NPDES Permit). The 2012 NOI was contradictory over where Outfall No. 001 discharged to (Swatara Creek or Middle Creek) without stating that there were two different outfalls being discussed. This outfall is being redesignated Outfall No. 006 in this IW NPDES Permit.
    - IW Outfall No. 001 is the permitted IW Outfall discharge to Middle Creek.
  - **Mismatch between Leachate Generated and Accounted for**: In the 2025 NPDES Permit Application update (**Public Upload# 340722)**, CES estimates an average of 72,000 GPD leachate generation rate, with storage of higher volumes in the raw leachate storage tanks during high flow months, while indicating no discharge to SCMA Gordon POTW in recent years and with no discharge to NPDES Permit No. PA0065307 IW Outfall No. 001 (Middle Creek) per EDMR. EDMR-reported dust control usage rates do not match with the application leachate generation estimate or the application-provided Form 50 Quarterly flow estimates (see table below).
    - The (superseded) last PAG-03 NOI Renewal PAG032298 submittal to replace PAR502208 (Old April 4, 2023 PAG-03 NOI resubmittal On-Base No. 101315) March 30, 2023 Cover Letter (Osbourne) Item 2.c stated: "The discharge from the treatment plant covered under the Individual IW NPDES Permit is typically conveyed to one of the storage tank and utilized for dust control on-site. **If the on-site tanks are at capacity the discharge goes to Basin 1 and Outfall 001. This outfall discharges to Swatara Creek which has an AMD, a limestone treatment is in place at the outfall"**. (Bolding added). **NOTE**: This would be an unauthorized IW discharge to an unauthorized stream as discharged treated effluent is not being used as Reclaimed Water, with no accounting of Chesapeake Bay mass loadings under the Chesapeake Bay Part C.I conditions nutrient trading.

- EDMR indicated no IW discharge and no IWTP Outfall No. 001 monitoring/reporting per existing IW NPDES Permit No. PA0065307 requirements.
- The PAG-03 permit did not authorize any wastewater discharge to any stormwater outfall. The IW NPDES Permit only authorized fully treated wastewater to be discharged to Middle Creek via the IW Outfall No. 001. Discharging to the waters of the Commonwealth is not beneficial use, and certainly not Reclaimed Water usage and/or beneficial use as dust control or IWTP make-up water (as approved in the WQM Permit). See also Chapter 287 definitions pertaining to waste, beneficial use, etc.

▪ 2025 NPDES Permit Application Update information:

- ICP Section F (Storm Water Management Practices, page 17) also notes non-stormwater discharges are discharged to either the SCMA Gordon POTW or "a permitted discharge from our on-site treatment facility to Swatara Creek" contrary to NPDES/WQM permitting and other parts of the 2025 NPDES Permit Application update.
- ICP Section I (Certification Requirements for Non-Storm Water Discharges, page 18) also references non-stormwater discharges to Swatara Creek contrary to NPDES/WQM permitting , which invalidates the PPC Plan/ICP certification regarding Non-Stormwater discharges.
- The NPDES Application Update flowcharts do not include discharge to the wrong outfall/stream (SW Outfall No. 001 to Swatara Creek). The 2025 NPDES Application Update Figure (Drainage Areas) shows the IWTP in relation to Sediment Basin 1, but it is unclear what valve or sump was used to direct any unauthorized IWTP discharges to Basin 1/SW Outfall No. 001 and Swatara Creek.
- The 2025 NPDES Permit Application Update finally clarified that there are two Outfall Nos. 001 onsite, the Stormwater Outfall 001 to Basin 1/Swatara Creek and the NPDES Permitted IW Outfall 001 to Middle Creek. The Update indicated no stormwater goes to IW Outfall No. 001. The previous 2012 NOI had contradictory-indicated 001 discharged to Middle Creek and Swatara Creek in different spots in the NOI. **NOTE**: Stormwater Outfall No. 001 is being redesignated as Outfall No. 006 in the IW NPDES Permit Renewal FS to distinguish it from the IW Outfall No. 001 (Middle Creek). CES wanted to call the IW Outfall: "Outfall 001IW" but that is not acceptable or even doable in E-facts/WMS.
- Effluent Reuse Monitoring Plan (ERMP) Attachment 4 (Monthly Volumes of RO Treated Effluent Used for Dust Control) identified average monthly volumes of effluent used for dust control form August 2023 through July 2025. See table below, but to summarize:
  - Reported monthly average uses ranged from 14,839 GPD to 44,839 GPD (far below average leachate production rates identified in the MSW Landfill Permit Form 50s and this NPDES permit application), with many months listed as "not available" (which is both unacceptable and nonsensical for dust spray usage, unless they have simply not been keeping records (also unacceptable). WQM Permit No. 5411403 Special Condition C required the permittee to keep records of monthly flow quantities utilized for reuse, and to submit them as an attachment to the NPDES Permit monthly DMRs.
  - The excess treated leachate must either be stored onsite (1 MG treated tank and two 1.5 MGD raw leachate tanks) or discharged to SCMA Gordon (which had not indicated acceptance in 2024) or trucked offsite to another POTW or otherwise illegally disposed of.

▪ EDMR and Update Information and summary of Form 50-quarterly average (not sure which sampling date applies to which quarter): The available information shows the following mismatches (i.e. substantial IWTP effluent volumes not accounted for by dust control usage in the absence of any IW Outfall No. 001 discharge or discharge to the POTW:

Date	Effluent Used for dust control per CES consultant	DMR-reported Total dust control usage (Gallons)	DMR-estimated dust control Usage Average (GPD)	Quarterly Form 50 Municipal Waste Landfill Leachate Analyses Raw Leachate Volume estimate* (GPD)	EDMR Reported Monthly Average values

	(GPD)				
July 2025	52,258	1,620,000	52,258	-	<6 mg/l BOD5; <5 mg/l TSS; <1/100 ml Fecals
June 2025	Not available	1,550,000	51,667	-	See above
May 2025	23,000	690,000	23,000	-	See above
April 2025	39,000	1,170,000	39,000	74,196.67 LCZ	See above
March 2025	44,333	1,330,000	44,333	-	See above
Feb 2025	25,357	710,000	25,357	-	See above
Jan 2025	15,484	480,000	15,484	74,713.70 LCZ	See above
Dec 2024	14,839	Not completed	Not completed	-	See above
Nov 2024	27,667	830,000	27,667	-	See above
Oct 2024	44,839	1,390,000	44,839	47,375.02 LCZ	See above
Sept 2024	Not available	1,200,000	40,000	-	See above
Aug 2024	Not available	990,000	31,935	-	8.3 mg/l BOD5; <5 TSS; <1 Fecals
July 2024	Not available	1,790,000	57,742	82,840.88 LCZ	<6 mg/l BOD5; <5 mg/l TSS;
June 2024	35,000	2,250,000	75,000	-	See above
May 2024	Not available	1,940,000	62,581	-	See above
April 2024	Not available	1,470,000	49,000	80,775.82 LCZ	See above
March 2024	Not available	1,280,000	41,290	-	See above
Feb 2024	Not available	1,320,000	45,517	-	See above
Jan 2024	Not available	1,550,000	50,000	63,628.26 LCZ	See above
Dec 2023	Not available	1,359,500	43,855	-	-
Nov 2023	Not available	1,800,000	60,000	-	-
Oct 2023	Not available	2,010,000	67,000	62,316.30 LCZ	-
Sept 2023	Not available	1,850,000	61,667	-	-
Aug 2023	Not available	1,000,000	32,258	-	-
July 2023	-	-	-	71,153.85 LCZ	-
June 2023	-	-	-	-	-
May 2023	-	-	-	-	-
April 2023	-	-	-	-	-
March 2023	-	-	-	-	-
Feb 2023	-	-	-	-	-
Jan 2023	-	-	-	77,256.70 LCZ	-

*Reported lab sample date during that month. Forms also reported Cyanide, Oil & Grease, Hexavalent Chromium, Phosphorus, TKN, and TSS values of the raw influent in addition to standard Form 50 parameters.

- **Additional Usage Rate Information**:

Month	Total Usage (Gallons)	Average usage (Gallons)	Range of Amount used for dust control (Gallons)	Number of no usage days
Jan 2024	1,550,000	50,000	150,000 - 0	12
Feb 2024	1,320,000	45,517	120,000 - 0	11
March 2024	1,280,000	41,290	100,000 - 0	10
April 2024	1,470,000	49,000	90,000 - 0	8
May 2024	1,940,000	62,581	140,000 - 0	10
June 2024	2,250,000	75,000	190,000 – 0	8
July 2024	1,790,000	57,742	140,000 – 0	6
Aug 2024	990,000	31,935	110,000 - 0	16
Sept 2024	1,200,000	40,000	100,000 - 0	10
Oct 2024	1,390,000	44,839	110,000 - 0	9
Nov 2024	830,000	27,667	80,000 – 0	13
Dec 2024	460,000	14,839	70,000 - 0	21
Jan 2025	480,000	15,484	50,000 – 0	18
Feb 2025	710,000	25,357	80,000 – 0	17
March 2025	1,330,000	44,333	110,000 - 0	10

- **Additional WQM Permit Noncompliance:**
  - **IWTP:** They claim no modification of the permitted IWTP "that would require submission of a separate WQM or Solid Waste Management Permit Amendment Application. Similarly, there have been no changes to the treatment process that have required submission of an NPDES Permit Part A.III Planned Changes to Physical Facilities notification to PA DEP. The flocculation pre-treatment process has been discontinued; however, the equipment remains onsite, and the tanks are used but flocculation chemicals are no longer added". **There were IWTP modifications per MSW Landfill Permit Amendments that were not addressed by concurrent WQM permit amendment (see Treatment Plant Section). The 12/13/2017 Inspection Report indicates a third RO Stage has been installed. Also, repurposing tanks requires clarification on their new usage.** Basically, it is the Department that makes permit requirement decisions, not the permittee when they modify a WQM or NPDES-permitted facility via the NPDES Permit Part A.III.C.2 (Planned Changes to Physical Facilities) notification requirements.
  - The Fecal Coliform sampling point was explicitly required to be at the IWTP Treated Effluent Tanks, but it appears they may have been sampling inside the IWTP (contrary to WQM permit and Reuse Guidance requirements).

- 2/10/2025 NOV issued due to failure to pay Annual fee for PA0065307.
- 2023 DEP Inspection Report indicated treated effluent being used also as "utility water" onsite, but that can be interpreted as more than has been approved (use within the IWTP building's secondary containment; use as dust control on landfill roads). Ferric chloride was noted as a wastewater treatment chemical in usage onsite.
- The facility had DO, Ammonia-N, Copper & Zinc exceedances when it discharged during 2018.

Development of Effluent Limitations

Outfall No. 001 (IW) **Design Flow (MGD)** .090
Latitude 40º 39' 55.00" **Longitude** -76º 23' 8.00"
Wastewater Description: IW Process Effluent with ELG, Sewage Effluent

Permit Limits and/or Monitoring Requirements: Changes from 2016 Draft NPDES Permits bolded.

Parameter	Limit (mg/l unless otherwise specified)	SBC	Model/Basis
Flow	Report MGD Report MGD	Monthly Average Daily Max	Existing permit requirement.
BOD5	15.0 lb/d 30.0 lb/d 20.0 40.0 50**.0**	Monthly Average Daily Max Monthly Average Daily Max IMAX	Existing permit requirement supersedes 40 CFR 445 ELG. Significant digit added. Modeled at 22.0 mg/l CBOD5 per 1.2 standard treated sewage BOD/CBOD5 correlation to show existing limits are supported. Application data: 2016: < 6 mg/l max (3 samples) 10-12/2018 EDMR: 25.4 mg/l daily max 2025 Data: 10 mg/l max and 8 mg/l max avg monthly (4 samples)
TSS	7.5 lb/d 15.0 lb/d 10.0 20.0 25**.0**	Monthly Average Daily Max Monthly Average Daily Max IMAX	Existing permit requirement supersedes 40 CFR 445 ELG. Significant digit added. Application data: 2016: < 5 mg/l (3 samples) 10-12/2018 EDMR: 5.2 mg/l daily max 2025 Data: <2.0 mg/l max and <2 mg/l max avg monthly (4 samples)
pH	6.0 – 9.0 SU	**IMIN** - **IMAX**	Existing Technology limit (Chapter 95.2 and 40 CFR 445) Application data: 2016: 7.65 SU max (3 samples) 10-12/2018 EDMR: 6.20 – 7.60 SU range 2025 Data: 7.30 – 8.40 SU (4 samples)
Dissolved Oxygen (DO)	7.0	**IMIN**	Existing WQBEL. Monitoring not required when treated wastewater is used for dust control and/or other approved reuse. Application Data: 2016: None 10-12/2018 EDMR: **5.00 mg/l minimum** 2025 Data: None
Temperature (°F)	Report °F Report °F	**Monthly Average** **Daily Max**	Existing monitoring requirement. Monitoring not required when treated wastewater is used for dust control and/or other approved reuse. Application data: 2016: None 10-12/2018 EDMR: 79.3 °F daily max 2025 Data: None
Fecal Coliform	200/100 ml GEO 1,000/100 ml	Monthly Average IMAX	Existing WQBEL (Daily Max limit in previous Draft). Application data: 2016: <1/100 ml max 10-12/2018 EDMR: <1/100 ml daily max

			2025 data: 36/100 ml max and <12.7/100 ml (4 samples)
E Coli	**Report #/100 ml**	**IMAX**	**New standard quarterly monitoring requirements (Chapter 92a.61)** Application data: None (not in pollutant group)
Ammonia-Nitrogen **(Interim)**	Report lb Report lb 2.25 lb/d 4.5 lb/d 3.0 6.0 7.5	Total Monthly Total Annual Monthly Average Daily Max Monthly Average Daily Max IMAX	New WQBELs per updated WQM Model 7.1.1 analysis (with seasonal limits). Existing WQBEL supersedes 40 CFR 445 ELG. Chapter 92.61 and Chesapeake Bay monitoring requirement. Application data: 2016: 3.97 max and 2.6 mg/l average (3 samples) 10-12/2018 EDMR: **8.7 mg/l daily max** 2025 data: **8.41 mg/l max and 6.77 mg/l max avg monthly (4 samples)**
Ammonia-Nitrogen **(Final)** **(May 1 - Oct 31)**	Report lb Report lb **1.6** lb/d **3.2** lb/d **2.15** **4.3** **4.3**	Total Monthly Total Annual Monthly Average Daily Max Monthly Average Daily Max IMAX	See above.
Ammonia-Nitrogen **(Final)** **(Nov 1 – April 30)**	Report lb Report lb 2.25 lb/d 4.5 lb/d 3.0 6.0 7.5	Total Monthly Total Annual Monthly Average Daily Max Monthly Average Daily Max IMAX	See above. Antibacksliding prohibition applies to granting any relief from existing limits (i.e. seasonal limits).
Total Phosphorus	0 lb Report lb Report lb Report lb Report lb/d Report lb/d Report Report	Net Total Annual Total Annual Total Monthly Monthly Average Daily Max Monthly Average Daily Max	Ongoing Chesapeake Bay requirement. Application data: 2016: <0.05 mg/l max (3 samples) 10-12/2018 EDMR: <0.1 mg/l average monthly 2025 data: 0.02 mg/l max and 0.008 max month avg (4 samples)
Total Nitrogen (Nitrate-Nitrite-N + TKN measured in same sample)	0 lb Report lb Report lb Report lb/d Report lb/d Report Report	Net Total Annual Total Annual Total Monthly Monthly Average Daily Max Monthly Average Daily Max	Ongoing Chesapeake Bay requirement. Additional reporting of mass loading and daily max values. Application data: 2016: <0.69 mg/l Nitrate-Nitrite and 5.51 mg/l TKN max (3 samples) 10-12/2018 EDMR: <17.2 mg/l monthly average 2025 data: 4 sample results that were calculated to be: 7.14 mg/l TN; 9.1 mg/l TN; 11.14 mg/l TN; and 12.57 mg/l TN
Nitrate-Nitrite as N	Report lb Report lb Report lb/d Report lb/d Report Report	Net Total Annual Total Annual Total Monthly Monthly Average Daily Max Monthly Average Daily Max	Ongoing Chesapeake Bay requirement. Additional reporting of mass loading and daily max values. Application data: 2016: <0.69 mg/l max (3 samples) 10-12/2018 EDMR: <7.3 mg/l average monthly

			2025 data: 2.37 mg/l max and 0.93 mg/l max avg monthly (4 samples)
Total Kjehldahl Nitrogen (TKN)	Report lb Report lb Report lb/d Report lb/d Report Report	Total Annual Total Monthly Monthly Average Daily Max Monthly Average Daily Max	Ongoing Chesapeake Bay requirement. Additional reporting of mass loading and daily max values. Application data: 2016: 5.41 mg/l max and 3.79 mg/l average (3 samples) 10-12/2018 EDMR: 9.9 mg/l daily max 2025 data: 10.2 mg/l max and 8.20 mg/l max avg monthly (4 samples)
Total Aluminum	0.56 lb/d 1.12 lb/d 0.75**0** 1.17**0** 1.87**0**	Monthly Average Daily Max Monthly Average Daily Max IMAX	Existing WQBELs (TMDL WQS-based due to lack of Landfill Waste Load Allocations (WLAs) in applicable watershed TMDLs). Application data: 2016: <100 ug/l max (3 samples) 10-12/2018 EDMR: 0.28 mg/l max 2025 data: <5.00 ug/l (4 samples)
Total Boron **(interim)**	2.49 lb/d 3.88 lb/d 3.32 5.17 8.3	Monthly Average Daily Max Monthly Average Daily Max IMAX	**Revised WQBELs per Reasonable Potential Analysis with 3-year schedule of compliance**. Existing WQBELs not protective. Application data: 2016: 1140 ug/l max and 1030 ug/l average (3 samples) 10-12/2018 EDMR: 2.60 mg/l daily max 2025 data: 1820 ug/l max and 1690 ug/l max avg monthly (4 samples)
Total Boron **(Final)**	**1.58 lb/d** **2.47 lb/d** **2.106** **3.285** **5.264**	Monthly Average Daily Max Monthly Average Daily Max IMAX	**See above.**
Total Copper **(Interim)**	0.0016 lb/d 0.0025 lb/d 0.0021 0.0033 0.052	Monthly Average Daily Max Monthly Average Daily Max IMAX	**Revised WQBELs per Reasonable Potential Analysis with 3-year schedule of compliance**. Application data: 2016: <1 ug/l max (3 samples) 10-12/2018 EDMR: **0.0037 mg/l daily max** 2025 data: 1.9J ug/l max (0.0019 mg/l) and <1.1 ug/l max avg monthly (4 samples). Lab sheets indicated 0.7J ug/l and 1.4 ug/l. TQL of 4.0 ug/l (**WQBELs below QL applies**)
Total Copper **(Final)**	**0.0007 lb/d** **0.0009 lb/d** **0.9 ug/l** **1.19 ug/l** **1.19 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	See above.
Hexavalent Chromium	**Report lb/d** **Report lb/d** **Report ug/l** **Report ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max**	**New M&R per Reasonable Potential Analysis.** Application data: 2016: 0.36 ug/l max and <0.154 ug/l average (3 samples). <0.133J mg/l lab sheet value. 2025 data: 2.0 ug/l (0.0020 mg/l) max and <1.2 ug/l max avg monthly (4 samples). Labsheets reported **0.0048** mg/l, 0.0008J mg/l and 0.0013 mg/l. TQL of 1.0 ug/l.

Free Cyanide	**0.004 lb/d** **0.006 lb/d** **0.005** **0.008** **0.013**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBEL per Reasonable Potential Analysis with 3-year schedule of compliance and interim M&R.** Application data: 2016: **No data**. Total Cyanide was <10 ug/l 2025 data: **0.030** mg/l max and <0.018 mg/l max avg monthly (4 samples). Also detected at **0.01J** and 0.021 mg/l. No influent sample result provided. Total Cyanide was 0.034 mg/l max (0.01J mg/l other samples) effluent and 0.35 mg/l influent. TQL 1.0 ug/l (0.0010 mg/l)
Dissolved Iron	0.225 lb/d 0.345 lb/d 0.30**0** 0.46**0** 0.75**0**	Monthly Average Daily Max Monthly Average Daily Max IMAX	Existing WQBELs (TMDL WQS-based due to lack of Landfill Waste Load Allocations (WLAs) in applicable watershed TMDLs. Application data: 2016: <20 ug/l max (3 samples) 10-12/2018 EDMR: 0.12 mg/l daily max 2025 data: <20 ug/l max and max avg monthly (4 samples)
Total Iron	1.125 lb/d 1.75 lb/d 1.5**00** 2.34**0** 3.76**0**	Monthly Average Daily Max Monthly Average Daily Max IMAX	Existing WQBELs (TMDL WQS-based due to lack of Landfill Waste Load Allocations (WLAs) in applicable watershed TMDLs. Significant digit added. Application data: 2016: 42 ug/l max and <27.3 ug/l average (3 samples) 10-12/2018 EDMR: 0.17 mg/l daily max 2025 data: <20 ug/l max and max avg monthly (4 samples)
Total Manganese	0.75 lb/d 1.17 lb/d 1.0**0** 1.56 2.5**0**	Monthly Average Daily Max Monthly Average Daily Max IMAX	Existing WQBELs (TMDL WQS-based due to lack of Landfill Waste Load Allocations (WLAs) in applicable watershed TMDLs. Significant digit added. Application data: 2016: <20 ug/l max (3 samples) 10-12/2018 EDMR: 0.026 mg/l daily max 2025 data: 35.6 ug/l max and <9.9 ug/l max avg monthly (4 samples)
Total Mercury	**0.00005 lb/d** **0.00008 lb/d** **0.066 ug/l** **0.10 ug/l** **0.016 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBEL per Reasonable Potential Analysis, with 3-year schedule of compliance and interim M&R.** Application data: 2016: **0.06 ug/l max** and 0.043 ug/l average (3 samples). 0.21 ug/l result in one sample. Test results for other samples were ND above lab sheet QL (i.e. EPA Sufficiently Sensitive Rule applies). 2025 data: <0.100 ug/l max and max avg monthly (4 samples). Single influent sample was <0.100 ug/l. TQL of 0.2 ug/l (**WQBELs below QL applies**).
Total Nickel	**Report lb/d** **Report lb/d**	**Monthly Average** **Daily Max**	**New M&R per Reasonable Potential Analysis.**

	Report **Report**	**Monthly Average** **Daily Max**	Application data: 2016: <1 ug/l max (3 samples) 2025 data: 1.4 ug/l max and <0.53 ug/l max avg monthly (4 samples). Labsheets included 0.3J ug/l. Single influent sample was 168.0 ug/l. **TQL of 4.0 ug/l**
Total Silver	**0.00002 lb/d** **0.00002 lb/d** **0.025 ug/l** **0.033 ug/l** **0.033 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBEL per Reasonable Potential Analysis with 3-year schedule of compliance, and interim M&R.** Application data: 2016: <0.33 ug/l (3 samples) with labsheet **0.2J ug/l, 0.4J ug/l, 0.6J ug/l reported**. **TQL of 0.4 ug/l** 2025 data: <0.10 ug/l max and max avg monthly (4 samples). Single influent sample was 0.2 ug/l. DEP TQL of 0.4 ug/l. **(WQBELs below QL applies)**
Total Thallium	**Report lb/d** **Report lb/d** **Report** **Report**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max**	**New M&R Requirement per Reasonable Potential Analysis.** 2016: <1 ug/l (3 samples) 2025 data: **0.1J** ug/l max and 0.010 ug/l average (4 samples). Single influent sample was <0.10 ug/l. **DEP TQL of 2.0 ug/l. (WQBELs below QL applies)**
Total Zinc **(Interim)**	0.016 lb/d 0.026 lb/d 0.022 0.035 0.055	Monthly Average Daily Max Monthly Average Daily Max IMAX	**Revised WQBELs per Reasonable Potential Analysis with 3-year schedule of compliance**. Existing WQBELs not protective. Existing WQBELs superseded 40 CFR 445 ELG limits. Application data: 2016: <5 mg/l max (3 samples) 10-12/2018 EDMR: **0.038 mg/l daily max** 2025 data: 6.5 ug/l max and <3.7 ug/l max avg monthly (4 samples). Labsheet also reported 2.5J ug/l sample.
Total Zinc **(Final)**	**0.008 lb/d** **0.008 lb/d** **10.2 ug/l** **10.2 ug/l** **10.2 ug/l**	Monthly Average Daily Max Monthly Average Daily Max IMAX	**See above**
Phenol	0.011 lb/d 0.019 lb/d 0.015 0.026 0.037	Monthly Average Daily Max Monthly Average Daily Max IMAX	Existing ELG limits Application data: 2016: <1.0 ug/l max (3 samples) 10-12/2018 EDMR: 0.010 mg/l daily max 2025 data: 1.60 ug/l max and <1.4 ug/l max avg monthly (4 samples)
a-Terpineol	0.012 lb/d 0.025 lb/d 0.016 0.033 0.04**0**	Monthly Average Daily Max Monthly Average Daily Max IMAX	Existing ELG limits. Significant digit added. Application data: 2016: No data 10-12/2018 EDMR: FF reporting 2025 data: 0.2 ug/l (0.0002 mg/l) max and <0.2 ug/l max avg monthly (4 samples)

Benzoic Acid	0.053 lb/d 0.09 lb/d 0.071 0.12 0.17	Monthly Average Daily Max Monthly Average Daily Max IMAX	Existing ELG limits Application data: 2016: No data 10-12/2018 EDMR: 0.003 mg/l daily max 2025 data: 15.1 ug/l max and 11.9 ug/l max avg monthly (4 samples)
p-Cresol	0.010 lb/d 0.019 lb/d 0.014 0.025 0.038	Monthly Average Daily Max Monthly Average Daily Max IMAX	Existing ELG limits Application data: 2016: No data 10-12/2018 EDMR: 0.002 mg/l daily max 2025 data: 0.5 ug/l max and <0.33 ug/l max avg monthly (4 samples)
Total Dissolved Solids (TDS)	**Report lb/d** **Report lb/d** **Report** **Report**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max**	**New monitoring requirement (Chapter 92a.61)** 2016: 68 mg/l max and 51.7 mg/l average (3 samples) 2025 data: 61 mg/l max and 45 mg/l max avg monthly (4 samples)
Acrolein	**0.002 lb/d** **0.003 lb/d** **3.00 ug/l** **3.95 ug/l** **3.95 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBELs per Reasonable Potential Analysis with 3-year schedule of compliance, with interim monitoring** 2016: <1.9 ug/l (3 samples) with labsheets reporting <0.0047J mg/l value. 2025 data: <4.00 ug/l max and average. Insensitive ND concentrations triggering permit limits per EPA sufficiently sensitive Rule. No Acrolein influent sample result provided. DEP TQL is 2.0 ug/l.
Acrylamide	**0.0002 lb/d** **0.0004 lb/d** **0.0003** **0.0005** **0.0008**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBELs per Reasonable Potential Analysis with 3-year schedule of compliance, with interim monitoring** Application data: 2016: No data **TQL: None (other facilities have reported 10 ug/l results)** 2025 data: <5.0 mg/l max and max avg monthly (4 samples). Single influent sample was <5.0 mg/l. No DEP TQL but other facilities have reported 10 ug/l results **(WQBELs below QL limit applies)**
Bis(2-Ethylhexyl)Phthalate	**0.001 lb/d** **0.002 lb/d** **1.43 ug/l** **2.24 ug/l** **3.58 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBELs per Reasonable Potential Analysis with 3-year schedule of compliance, with interim monitoring** 2016: <1.0 ug/l (3 samples) 2025 data: **6.7** ug/l max and <4.4 ug/l avg (4 samples). Single influent sample was 19.1 ug/l. DEP TQL of 5.0 ug/l **(WQBELs below QL limit applies)**
n-Nitrosodimethylene	**0.000002 lb/d** **0.000004 lb/d** **0.003 ug/l** **0.005 ug/l** **0.008 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBELs per Reasonable Potential Analysis with 3-year schedule of compliance, with interim monitoring** 2016: <1.0 ug/l (3 samples) 2025 data: **0.2J** ug/l max and <0.17 ug/l avg (4 samples) with labsheets including 0.18J ug/l. Single influent sample at <0.50 ug/l.

			DEP TQL of 5.0 ug/l **(WQBELs below QL limit applies)**
Alpha-BHC	**0.000001 lb/d** **0.000002 lb/d** **0.002 ug/l** **0.003 ug/l** **0.004 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBELs per Reasonable Potential Analysis with 3-year schedule of compliance, with interim monitoring** 2016: <0.052 ug/l (3 samples) with <0.050 ug/l on one labsheet. 2025: <0.00244 ug/l max and <0.0021 ug/l avg (4 samples). Labsheets included **0.0023J** ug/l. Single influent sample at <0.00202 ug/l. DEP TQL of 0.05 ug/l **(WQBELs below QL limit applies)**
4,4-DDT	**1.01E-07 lb/d** **1.57E-07 lb/d** **0.0001 ug/l** **0.0002 ug/l** **0.0003 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBELs per Reasonable Potential Analysis with 3-year schedule of compliance, with interim monitoring** Application data: 2016: **0.026J ug/l max** and <0.009 ug/l average (3 samples). Lab sheets reported <0.0011J ug/l 2025 data: <0.00244 ug/l max and <0.0021 ug/l max avg monthly (4 samples). Single influent sample at <0.00202 ug/l. DEP TQL of 0.05 ug/l **(WQBELs below QL limit applies)**
4,4-DDE	**6.73E-08 lb/d** **1.05E-07 lb/d** **0.00009 ug/l** **0.0001 ug/l** **0.0002 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBEL per Reasonable Potential Analysis.** Application data: 2016: **0.019J ug/l max** and <0.008 ug/l average (3 samples). Lab sheets reported <0.0020 ug/l J **TQL of 0.05 ug/l** 2025 data: **0.0034J** ug/l max and <0.0025 ug/l max avg monthly (4 samples). Single influent sample at <0.00202 ug/l. DEP TQL of 0.05 ug/l **(WQBELs below QL limit applies)**
4,4-DDD	**3.36E-07 lb/d** **5.25E-07 lb/d** **0.0004 ug/l** **0.0007 ug/l** **0.0010 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBELs per Reasonable Potential Analysis with 3-year schedule of compliance, with interim monitoring** Application data: 2016: <0.00078J ug/l max and <0.00077J ug/l average (3 samples). **TQL of 0.05 ug/l** 2025 data: <0.00244 ug/l max and <0.0021 ug/l max avg monthly (4 samples). Lab sheets included **0.0021J** ug/l. Single influent sample at <0.00202 ug/l. DEP TQL of 0.05 ug/l **(WQBELs below QL limit applies)**
Dieldrin	**3.36E-09 lb/d** **5.25E-09 lb/d** **0.000004 ug/l** **0.000007 ug/l** **0.000010 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBELs per Reasonable Potential Analysis with 3-year schedule of compliance, with interim monitoring** 2016: <0.0011J ug/l max and <0.00103 ug/l (3 samples). Lab sheets reported <0.0010J ug/l. 2025 data**: 0.0028J** ug/l max and <0.00234 ug/l avg (4 samples). Single influent sample was 0.0058 ug/l.

			DEP TQL of 0.05 ug/l **(WQBELs below QL limit applies)**
Heptachlor	**2.02E-08 lb/d** **3.15E-08 lb/d** **0.00003 ug/l** **0.00004 ug/l** **0.00007 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBELs per Reasonable Potential Analysis with 3-year schedule of compliance, with interim monitoring** 2016: <0.052 ug/l max and 0.051 ug/l avg (3 samples) 2025 data: **0.0035J** ug/l max and <0.0025 ug/lavg (4 samples). Single influent sample at 0.0099 ug/l. DEP TQL of 0.05 ug/l **(WQBELs below QL limit applies)**
Heptachlor Epoxide	**1.01E-08 lb/d** **1.57E-08 lb/d** **0.0001 ug/l** **0.0002 ug/l** **0.0003 ug/l**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max** **IMAX**	**New WQBELs per Reasonable Potential Analysis with 3-year schedule of compliance, with interim monitoring** 2016: <0.052 ug/l max and 0.051 ug/l avg (3 samples). 2025 data: **0.0029J** ug/l max and <0.0024 ug/l avg (4 samples). Single influent sample at <0.00202 ug/l. DEP TQL of 0.05 ug/l **(WQBELs below QL limit applies)**
Osmotic Pressure	**Report mOs/kg** **Report mOs/kg** **Report mOs/kg**	**Monthly Average** **Daily Max** **IMAX**	**New M&R requirement per Reasonable Potential analysis.** 2016: No data 2025 data: <20.0 mOsm/kg (4 samples) No DEP TQL.
HFPO-DA, PFOS, PFOA, PFBS	**Report lb/d** **Report lb/d** **Report ng/l** **Report ng/l**	**Annual Average** **Daily Max** **Annual Average** **Daily Max**	**Annual monitoring per DEP SOP & PFAS Strategy: If sampling that is completed as part of the permit renewal application demonstrates nondetect values at or below the Target QLs for PFOA, PFOS, HFPO-DA and PFBS (all of these compounds in a minimum of 3 samples), the permit will establish an annual monitoring requirement for PFOA, PFOS, HFPO-DA and PFBS in the permit (with footnote that monitoring may cease.** 2025 Effluent data (4 samples): HFPO-DA: ND at 0.64 ng/l (TQL at 6.4 ng/l) but lab RL at 1.4 or 1.5 ng/l in some labsheets. (Single influent sample ND at 14 ng/l lab QL). PFOS: ND at 0.36 ng/l (TQL at 3.7 ng/l) but lab RL at 1.4 or 1.5 ng/l in some labsheets. (Single influent sample ND at 5400 ng/l). PFOA: ND at 1.0 ng/l (TQL at 4.0 ng/l) but lab RL at 1.4 or 1.5 ng/l in some labsheets. (Single influent sample ND at 1800 ng/l). PFBS: ND at 0.93 ng/l (TQL at 3.5 ng/l) but lab RL at 1.4 or 1.5 ng/ in some labsheets. (Single influent sample ND at 54 ng/l).
Rainfall	**Report inches**	**Total Monthly**	**To correlate with beneficial reuse of treated effluent (which cannot be used for dust control when it is raining). The landfill is presumed to have a rain gage.**

Comments:

- Requirements updated to current EDMR requirements (grab sampling instantaneous minimum, updated units) as needed.
- Going to 24-hour composite sampling due to Chesapeake Bay limits and to eliminate biasing.
- Standard "daily when discharging", "weekly when discharging", and "monthly when discharging" minimum frequency retained.
- Files contain note that the facility accepts fracking wastes, triggering evaluation of potential additional limits for Gross Alpha, Total Beta, Radium 226/228, Strontium and Uranium. Application data was used in the Reasonable Potential Analysis.
- Treated Effluent Reclaimed Water monitoring includes Chloride M&R for surface/groundwater monitoring purposes, but it is not needed for a discharge to Middle Creek per Reasonable Potential Analysis.

WQM Model 7.1.1: More stringent Ammonia-N limits needed. See Part C Schedule of Compliance.

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
07D	10078	MIDDLE CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
0.370	CES Landfilll	PA0065307	0.090	CBOD5	22		
				NH3-N	2.15	4.3	
				Dissolved Oxygen			7

* 1.2 BOD5 – CBOD5 Total Summer

CESWQModel.pdf

Updated Reasonable Potential Analysis:

- See TMS output and other modeling below. Water Quality modeling was updated due to changes in DEP modeling program (TMS superseding PENTOXSD and previous Toxic Screening Spreadsheet), Chapter 93 WQS changes, updated sampling data, etc.
  - General:
    - Existing more stringent TMDL-based limits and ELG-based limits superseded assorted TMS-generated permit limits and/or monitoring requirements.
    - The discharge Total Hardness is very low (≤1 or 2 mg/l) that renders some metals more toxic per their Chapter 93 Water Quality Standards (which are hardness dependent).
    - The facility has not been discharging via its permitted IW Outfall No. 001 (limits and monitoring requirements) or to the local POTW (with monitoring requirements), which means that there is little information on treated effluent consistency. The facility declined to provide any additional information/analysis to demonstrate consistent treated effluent quality, and failed to complete assorted NPDES Permit Application Form Pollution Identification and Analysis Section requirements (GC-MS 5-peak pollutants; Other Potential Pollutants) or the "Other Toxic Pollutants and Hazardous Substances Table" Section.
    - In June 2025, the membranes in the Reverse Osmosis (RO) treatment system at the LTP were changed to increase the performance efficiency of the system. To obtain the most representative data (per application), samples were collected starting in July 2025 after new membranes were installed and operating at full capacity as shown below. **NOTE**: In reality, the new application

effluent data does not represent what they have been dust spraying onsite, and it is unclear whether they were adequately treating the effluent prior to usage. This resulted in the need to retain older 2016 application and 2018 EDMR data in the Reasonable Potential Analysis.

- Stream Concentrations: Incorporated Stream concentration data from November 14, 2016 DEP Biologist (Sherril Leap) "Middle Creek Point of First Aquatic Use, Blythe Township, Schuylkill County" Memorandum.
- Consistency of Fully-Treated Effluent: The permittee declined to provide any additional data on fully-treated effluent consistency in the absence of any IW Outfall No. 001 monitoring data, any apparent POTW IU sampling data, any landfill-specific process data, etc.

- **2016 Sampling Results**: Due to lack of historical sampling data, the 2016 NPDES Permit Application sampling information could not be discarded for detected constituents (but insensitive ND concentration reporting was replaced):
  - Effluent: 1,4-Dioxane, 4,4-DDT, 4,4-DDE were detected in the effluent, but assorted constituents' analysis did not meet DEP TQL (i.e. insensitive non-detect concentration levels reported). Several Pollutant Group Tables' values were superseded by conflicting lab sheet data and the EPA Sufficiently Sensitive Rule (requiring the Department to treat any insensitive non-detect (ND) concentration (above the applicable DEP Target Quantitation Limit) as the constituent being present at the insensitive ND concentration level. Missing acrylamide or free cyanide analytical data in the application. Total Hardness was 1.47 m/l mg/l (expected due to effectiveness of RO treatment).
  - Mismatches with Lab Sheets: Some constituents like Acrolein had insensitive ND concentrations higher than the Pollutant Group-reported ND levels.
  - Influent: Insensitive ND levels also impacted value of influent sampling analysis data for organics. Detected organics included Phenol (1.2 ug/l), Acetanapthene (1.2 ug/l), Bis(2-ethylhexyl)Phthalate (3.8 ug/l), 1,4-Dioxane (25.9 ug/l), Phenanthrene (1.5 ug/l), 4,4-DDT (0.015 ug/l), 4,4-DDE (0.036 ug/l), Dieldrin (0.027 ug/l), Endrin (0.031 ug/l), Gross Alpha (9.20 +/- 13.5 pCi/L), Total Beta (390 +/- 71.6 pCi/L), Radium (5.56 +/- 2.02 pCi/L), Strontium (1490 ug/l), Uranium (<20 ug/l), and no Osmotic Pressure or ELG-specific constituents.
    - High AMD metals (Aluminum, Iron, Manganese) concentrations (above WQS) in raw influent as expected from use of AMD-impacted water onsite.
    - Pollutant Group Table 3 reported NDs above the constituent lab QL, which normally would be understood as the constituent being present at the reported insensitive ND level.
    - Pollutant Group Tables did not include "J" values (Detected above lab MDL) results found in lab sheets for Di-n-Octylphthalate, Fluoranthene, Hexachlorobutadiene, etc.
- 2025 Sampling Data: The information was used to update the Reasonable Potential Analysis (replacing less insensitive ND levels reported and any higher concentrations reported) but Pollutant Group tables mixed up units for several constituents (Free Cyanide, Acrylamide) and did not report detected "J" values for some constituents. In addition, with membrane replacement, the quality of the treated effluent is best-case treatment results.
- Available EDMR Sampling Data: Modeling inputs was updated with EDMR sampling data (from October – December 2018) when EDMR-reported max daily values exceeded the Pollutant Group Table values. As the 2025 NPDES application sampling was after complete membrane replacement, the 2025 data represents the best possible IWTP effluent quality, but 2016 results represent historical data.
- Other Application Information: Revised Application contained assorted MSW Landfill Permit Form 50 (Municipal Waste Landfill Leachate Analyses) for quarterly raw untreated landfill leachate from assorted landfill locations, providing leachate volumes (average GPD) and screening level analysis of MSW Landfill Permit-related constituents of interest. The screening levels were generally far above the DEP TQL and often above the equivalent CW Quarterly Leachate Reporting form's screening levels. The EPA Sufficiently Sensitive Rule renders most of the non-detect results unusable in the Reasonable Potential Analysis.
  - The facility declined to provide any additional information on treated wastewater consistency (due to lack of sampling) or any additional Raw Leachate data than found in the MSW Landfill Permit's Forms 50 (Raw Leachate Quarterly Sampling).
  - The Form 50s are of limited value, as they do not address all NPDES constituents of interest and used insensitive screening levels (above DEP TQLs and some current DEP Clean Water screening levels in the equivalent DEP form). The grab sampling was at different locations (to help determine if landfill subareas were experiencing LDZ flows/leakage) instead of the IWTP influent sampling location (at pump station to Raw Leachate Tanks). The application provided no

statistical analysis to determine ranges, average, etc. for the constituents. In terms of detected organics above the (often insensitive) screening levels: Acetone: 227 ug/l

- Form 50s for 2023, 2024 and the first two quarters of 2025 are included with the application. The application-enclosed MSW Landfill Form 50 (Municipal Waste Landfill Leachate Analyses) does not address all NPDES Clean Water requirements (see separate CW Raw Leachate Monitoring Form parameters and screening limits) or present DEP TQLs, but confirmed leachate generation rates and the presence of some constituents in the raw untreated leachate including cyanide, insensitive O&G, Hexavalent Chromium, TKS, TSS, Total Iron, other metals, etc. Other constituents were ND at insensitive ND concentrations (not meeting DEP TQL or present CW-version screening levels, but cannot be reviewed without new sampling data). They also sample at different locations with variable screening sensitivities, whereas the Department CW Program is primarily interested in IWTP influent sampling results (i.e. would need figure showing area breakdown to really make sense of the sampling results, other than gross screening for comparison with future influent data). Drawings breakdown the facility into a 27.23-acre Northern MSW Expansion area, 79.3-acre MSW Expansion Area. Forms 50 indicate an expansion of landfill drainage area from 177-acres to 180.5-acres during the time-frame.
    - Northern Expansion LC/LD zones: 171-acre drainage area; 25-acre LDZ
    - LD Zone East: 171-acre drainage area; 77-acre LDZ
    - Cell# 5: 171-acre drainage area; 28-acre LDZ
    - Southern Cell# 1: 171-acre drainage area; 22-acre LDZ
    - Southern Cell# 2: 171-acre drainage area: 19-acre LDZ
    - Eastern Expansion: 171-acre drainage area: 77-acre LDZ; 180.5 acres and 77.0 LDZ
    - Cell# 1 Northern: 171-acre drainage area: 22-acre LDZ
    - Cell# 2 Northern: 171-acre drainage area: 19-acre LDZ
    - Pumphouse SE-1: 171-acre drainage area: 22-acre LDZ
    - Pumphouse SE-2: 171-acre drainage area: 19-acre LDZ
    - LDZ Pumphouse SE-1 (different from above?): 180.50-acre drainage area: 22.77-acre LDZ
    - LDZ Pumphouse SE-2 (different from above?): 180.50-acre drainage area: 27.73-acre LDZ or 23.73-acre LDZ
- At the Form 50 raw leachate screening levels (inconsistent between Form 50 submittals and often far above an NPDES-acceptable screening level), they detected the following organics:
    - Acetone: 227 ug/l; 65 ug/l; <200 ug/l; <200 ug/l; <200 ug/l; <200 ug/l; 425 ug/l; 213 ug/l; <200 ug/l
    - Total Phenolics: 0.79 mg/l; 1.53 mg/l; <0.38 mg/l; <3.75 mg/l; 0.88 mg/l; <0.75 mg/l; 1.60 mg/l
    - Chloroform: 272 ug

Federal 40 CFR 445 ELGs for Discharges: The ELG parameters were previously addressed in the NPDES Permit, with concentration limits not impacted by landfill changes.

- Landfill Wastewater definition: All wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated storm water, contaminated ground water, and wastewater from recovery pumping wells. Landfill wastewater includes, but is not limited to, leachate, gas collection condensate, drained free liquids, laboratory derived wastewater, contaminated storm water and contact washwater from washing truck, equipment, and railcar exteriors and surface areas which have come in direct contact with solid waste at the landfill facility.
- Contaminated storm water definition: Storm water which comes in direct contact with landfill wastes, the waste handling and treatment areas, or **landfill wastewater** as defined above. Some specific areas of a landfill that may produce contaminated storm water include (but are not limited to): the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment or machinery that has been in direct contact with the waste; and waste dumping areas.
- Non-contaminated storm water definition: Storm water which does not come in direct contact with landfill wastes, the waste handling and treatment areas, or **landfill wastewater** that is defined above. Non-contaminated storm water includes storm water which flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.
- ELGs for Direct Dischargers:

40 CFR 445 Subpart B Regulated Parameter (ELG for RCRA Subtitle D non-HW landfills)	Max Daily (mg/l unless noted otherwise)	Max monthly Average (mg/l unless noted otherwise)
BOD5	140	37
TSS	88	27
Ammonia-N	10	4.9
a-Terpineol	0.033	0.016
Benzoic Acid	0.12	0.071
p-Cresol	0.025	0.014
Phenol	0.026	0.015
Zinc	0.20	0.11
pH	6.0 – 9.0 SU	

TMS Output:

pennsylvania DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

CES Landfill, NPDES Permit No. PA0065307, Outfall 001

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

	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	750	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Boron	1.58	2.47	2,106	3,285	5,264	µg/L	2,106	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Hexavalent Chromium	Report	Report	Report	Report	Report	µg/L	13.7	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Copper	0.0007	0.0009	0.9	1.19	1.19	µg/L	0.9	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Free Cyanide	0.004	0.006	0.005	0.008	0.013	mg/L	0.005	THH	Discharge Conc ≥ 50% WQBEL (RP)
Dissolved Iron	Report	Report	Report	Report	Report	µg/L	395	THH	Discharge Conc > 10% WQBEL (no RP)
Total Mercury	0.00005	0.00008	0.066	0.1	0.16	µg/L	0.066	THH	Discharge Conc ≥ 50% WQBEL (RP)
Total Nickel	Report	Report	Report	Report	Report	µg/L	4.44	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Silver	0.00002	0.00002	0.025	0.033	0.033	µg/L	0.025	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Thallium	Report	Report	Report	Report	Report	µg/L	0.32	THH	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	0.008	0.008	10.2	10.2	10.2	µg/L	10.2	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Acrolein	0.002	0.003	3.0	3.95	3.95	µg/L	3.0	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Acrylamide	0.0002	0.0004	0.0003	0.0005	0.0008	mg/L	0.0003	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Bis(2-Ethylhexyl)Phthalate	0.001	0.002	1.43	2.24	3.58	µg/L	1.43	CRL	Discharge Conc ≥ 50% WQBEL (RP)
n-Nitrosodimethylamine	0.000002	0.000004	0.003	0.005	0.008	µg/L	0.003	CRL	Discharge Conc ≥ 50% WQBEL (RP)
alpha-BHC	0.000001	0.000002	0.002	0.003	0.004	µg/L	0.002	CRL	Discharge Conc ≥ 50% WQBEL (RP)
4,4-DDT	1.01E-07	1.57E-07	0.0001	0.0002	0.0003	µg/L	0.0001	CRL	Discharge Conc ≥ 50% WQBEL (RP)
4,4-DDE	6.73E-08	1.05E-07	0.00009	0.0001	0.0002	µg/L	0.00009	CRL	Discharge Conc ≥ 50% WQBEL (RP)
4,4-DDD	3.36E-07	5.25E-07	0.0004	0.0007	0.001	µg/L	0.0004	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Dieldrin	3.36E-09	5.25E-09	0.000004	0.000007	0.00001	µg/L	0.000004	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Heptachlor	2.02E-08	3.15E-08	0.00003	0.00004	0.00007	µg/L	0.00003	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Heptachlor Epoxide	1.01E-07	1.57E-07	0.0001	0.0002	0.0003	µg/L	0.0001	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Osmotic Pressure	XXX	XXX	Report	Report	Report	mOs/kg	50.0	AFC	Discharge Conc > 10% WQBEL (no RP)

Application-identified Chemical Additives: The Chemical Additive forms were not properly completed (no Q7-10 flow identified; use of WQS (below) as the WQBEL without any water quality modeling or calculation regarding expected effluent concentration rate.) Acid-based chemicals are expected to be addressed by pH limits. 1 gallon dose at 0.071 MGD annual average discharge rate is ~1.4 mg/l (assuming density of water), which would indicate identified WQS-based WQBELs would not be exceeded.

Chemical Additive	Purpose	Usage Frequency	Max Usage Rate	Most stringent criteria	Form-Identified WQBEL

(Rochem Technical Services)					
Membrane Cleaner AA	Membrane Cleaner (alkaline cleaner/detergent with sodium hydroxide and other chemicals)	Bi-weekly	1 gal/2 weeks	4.4269 mg/l (chronic)	4.4169 mg/l
Membrane Cleaner BB	Membrane Cleaner (industrial cleaner: acids)	Monthly	1 gal/month	25.369 mg/l (chronic)	4.4169 mg/l
Membrane Cleaner CC	Membrane Cleaner (acids, ammonia)	Yearly	1 gal/year	4.1211 mg/l (chronic)	4.4169 mg/l

Table 1 (Superseding TMS Input Values when conflicting)

Constituent	**Pollutant Group Max Value (ug/l)**	**Effluent Lab Sheets High Value (ug/l)**	**10-12/2018 EDMR Daily Max data (ug/l)**	**DEP TQL (ug/l)**
Aluminum	<100	<100	**280**	10
Free Cyanide	No data (Total Cyanide was <10)	-	-	1
Hexavalent Chromium	**0.36 (QL identified at 250 ug/l)**	<0.133	-	1.0
Dissolved Iron	<20	<20	**120**	20
Mercury	0.06	**0.21**	-	0.2
Nickel	<1	<1	-	4.0
Silver	<0.33	**0.6**	-	0.4
Zinc	<5	<5	**38**	5.0
Acrylamide	No data	-	-	-
Benzene	<1	<1.0	-	**0.5**
1,3-Dichloropropylene	<0.1	<0.1	-	0.5
1,1,2,2-Tetrachloroethane	<0.1	**<0.2**	-	0.5
Trichloroethylene	<0.1	**<1.0**	-	**0.5**
1,1,2-Trichloroethane	<0.3	<0.3	-	0.5
Benzidine	<2.9	**<104**	-	**50**
Hexachlorobutadiene	<1.0	<1.0	-	**0.5**
1,2,4-Trichlorobenezene	<1.0	<1.0	-	**0.5**
Aldrin	<0.052	<0.052	-	**0.5**
a-BHC	<0.052	<0.052	-	**0.05**
b-BHC	<0.052	<0.052	-	**0.05**
4,4-DDT	0.026	0.026	-	0.05
4,4-DDE	0.019	0.019	-	0.05
a-Endosulfan	<0.052	<0.052	-	**0.05**
b-Endosulfan	<0.0022	<0.0022	-	**0.05**
Heptachlor	<0.052	<0.052	-	**0.05**
Heptachlor Epoxide	<0.052	<0.052	-	**0.05**

NOTE: Most permit limits and monitoring requirements due to insensitive ND concentrations, with conflict between Hexavalent Chromium table values and lab sheets. No Free Cyanide or Acrylamide data provided.

Table 2 (Available EDMR Concentration Data)

MONITORING START DATE	**PARAMETER**	**CONC 2 VALUE**	**CONC 2 LIMIT**	**CONC 2 SBC**	**CONC 3 VALUE**	**CONC 3 LIMIT**	**CONC 3 SBC**
10/01/2018	Aluminum, Total	< 0.10	0.75	Average Monthly	< 0.10	1.17	Daily Maximum

11/01/2018	Aluminum, Total	< 0.15	0.75	Average Monthly	**0.28**	1.17	Daily Maximum
12/01/2018	Aluminum, Total	< 0.10	0.75	Average Monthly	0.10	1.17	Daily Maximum
10/01/2018	Ammonia-Nitrogen	7.4	3.0	Average Monthly	8.7	6.0	Daily Maximum
11/01/2018	Ammonia-Nitrogen	5.31	3.0	Average Monthly	7.49	6.0	Daily Maximum
12/01/2018	Ammonia-Nitrogen	4.7	3.0	Average Monthly	5.89	6.0	Daily Maximum
10/01/2018	a-Terpineol	FF	0.016	Average Monthly	FF	0.033	Daily Maximum
11/01/2018	a-Terpineol	FF	0.016	Average Monthly	FF	0.033	Daily Maximum
12/01/2018	a-Terpineol	FF	0.016	Average Monthly	FF	0.033	Daily Maximum
10/01/2018	Benzoic Acid	< 0.0026	0.071	Average Monthly	< 0.0027	0.12	Daily Maximum
11/01/2018	Benzoic Acid	< 0.001	0.071	Average Monthly	< 0.0026	0.12	Daily Maximum
12/01/2018	Benzoic Acid	0.001	0.071	Average Monthly	0.003	0.12	Daily Maximum
10/01/2018	Biochemical Oxygen Demand (BOD5)	< 6	20	Average Monthly	< 6	40	Daily Maximum
11/01/2018	Biochemical Oxygen Demand (BOD5)	< 6	20	Average Monthly	< 6	40	Daily Maximum
12/01/2018	Biochemical Oxygen Demand (BOD5)	19.65	20	Average Monthly	25.4	40	Daily Maximum
10/01/2018	Boron, Total	1.50	3.32	Average Monthly	2.40	5.17	Daily Maximum
11/01/2018	Boron, Total	1.83	3.32	Average Monthly	2.60	5.17	Daily Maximum
12/01/2018	Boron, Total	1.45	3.32	Average Monthly	1.80	5.17	Daily Maximum
10/01/2018	Copper, Total	< 0.0010	0.0021	Average Monthly	< 0.0010	0.0033	Daily Maximum
11/01/2018	Copper, Total	0.0020	0.0021	Average Monthly	0.0037	0.0033	Daily Maximum
12/01/2018	Copper, Total	0.0012	0.0021	Average Monthly	0.0020	0.0033	Daily Maximum
10/01/2018	Fecal Coliform	< 1	200	Geometric Mean	< 1	1000	Maximum
11/01/2018	Fecal Coliform	< 1	200	Geometric Mean	< 1	1000	Maximum
12/01/2018	Fecal Coliform	< 1	200	Geometric Mean	< 1	1000	Maximum
10/01/2018	Iron, Dissolved	< 0.02	0.30	Average Monthly	0.02	0.46	Daily Maximum
11/01/2018	Iron, Dissolved	< 0.05	0.30	Average Monthly	**0.12**	0.46	Daily Maximum
12/01/2018	Iron, Dissolved	< 0.04	0.30	Average Monthly	< 0.10	0.46	Daily Maximum

10/01/2018	Iron, Total	< 0.023	1.5	Average Monthly	0.028	2.34	Daily Maximum
11/01/2018	Iron, Total	< 0.1	1.5	Average Monthly	0.17	2.34	Daily Maximum
12/01/2018	Iron, Total	0.02	1.5	Average Monthly	0.04	2.34	Daily Maximum
10/01/2018	Manganese, Total	< 0.022	1.0	Average Monthly	0.026	1.56	Daily Maximum
11/01/2018	Manganese, Total	< 0.02	1.0	Average Monthly	< 0.02	1.56	Daily Maximum
12/01/2018	Manganese, Total	< 0.02	1.0	Average Monthly	< 0.02	1.56	Daily Maximum
10/01/2018	Nitrate-Nitrite as N	< 7.3	Monitor and Report	Average Monthly			
11/01/2018	Nitrate-Nitrite as N	< 5.03	Monitor and Report	Average Monthly			
12/01/2018	Nitrate-Nitrite as N	< 0.6	Monitor and Report	Average Monthly			
10/01/2018	p-Cresol	< 0.0016	0.014	Average Monthly	< 0.0016	0.025	Daily Maximum
11/01/2018	p-Cresol	< 0.0009	0.014	Average Monthly	< 0.002	0.025	Daily Maximum
12/01/2018	p-Cresol	0.001	0.014	Average Monthly	0.002	0.025	Daily Maximum
10/01/2018	pH				6.90	9.0	Maximum
11/01/2018	pH				7.60	9.0	Maximum
12/01/2018	pH				7.4	9.0	Maximum
10/01/2018	Phenol	< 0.00057	0.015	Average Monthly	< 0.00057	0.026	Daily Maximum
11/01/2018	Phenol	< 0.005	0.015	Average Monthly	0.010	0.026	Daily Maximum
12/01/2018	Phenol	0.002	0.015	Average Monthly	0.003	0.026	Daily Maximum
10/01/2018	Temperature (deg F)	62.2	Monitor and Report	Average Monthly	79.3	Monitor and Report	Daily Maximum
11/01/2018	Temperature (deg F)	54.8	Monitor and Report	Average Monthly	67.0	Monitor and Report	Daily Maximum
12/01/2018	Temperature (deg F)	59	Monitor and Report	Average Monthly	69	Monitor and Report	Daily Maximum
10/01/2018	Total Kjeldahl Nitrogen	9.9	Monitor and Report	Average Monthly			
11/01/2018	Total Kjeldahl Nitrogen	6.6	Monitor and Report	Average Monthly			
12/01/2018	Total Kjeldahl Nitrogen	6.68	Monitor and Report	Average Monthly			

10/01/2018	Total Nitrogen	< 17.2	Monitor and Report	Average Monthly			
11/01/2018	Total Nitrogen	< 11.61	Monitor and Report	Average Monthly			
12/01/2018	Total Nitrogen	< 7.28	Monitor and Report	Average Monthly			
10/01/2018	Total Phosphorus	< 0.1	Monitor and Report	Average Monthly			
11/01/2018	Total Phosphorus	< 0.1	Monitor and Report	Average Monthly			
12/01/2018	Total Phosphorus	< 0.1	Monitor and Report	Average Monthly			
10/01/2018	Total Suspended Solids	< 5	10	Average Monthly	< 5	20	Daily Maximum
11/01/2018	Total Suspended Solids	< 5.05	10	Average Monthly	5.2	20	Daily Maximum
12/01/2018	Total Suspended Solids	< 5	10	Average Monthly	< 5	20	Daily Maximum
10/01/2018	Zinc, Total	< 0.017	0.022	Average Monthly	0.038	0.035	Daily Maximum
11/01/2018	Zinc, Total	< 0.013	0.022	Average Monthly	0.035	0.035	Daily Maximum
12/01/2018	Zinc, Total	< 0.011	0.022	Average Monthly	< 0.030	0.035	Daily Maximum

Development of Effluent Limitations

Outfall No.	002 – 009 (Stormwater outfalls)	**Design Flow (MGD)**	0
	40º 40' 32.00" (002)		-76º 22' 8.00" (002)
	40º 40' 8.00" (003)		-76º 22' 57.00" (003)
	40º 40' 23.00" (004)		-76º 22' 56.00" (004)
	40º 39' 58.00" (005)		-76º 22' 10.00" (005)
	40º 40' 38.00" (006) former 001 SW		-76º 22' 32.00" (006)
	40º 39' 55.47" (007)		-76º 22' 41.43" (007)
	40º 39' 55.47" (008)		-76º 22' 41.43" (008)
Latitude	40º 39' 53.59" (009)	**Longitude**	-76º 22' 0.33" (009)

Wastewater Description: Stormwater with fully treated effluent beneficially used within the drainage areas

Permit Limits & Monitoring Requirements:

Parameter	Limit (mg/l unless otherwise specified)	SBC	Model/Basis
pH	Report SU	**Inst. Min** - **IMAX**	Existing PAG-03 Appendix C monitoring requirement with 9.0 SU pH benchmark 2025 Application data: See table below. EDMR Data: See compliance section for Outfalls 001 (now 006), 002, and 003
Chemical Oxygen Demand (COD)	Report	**IMAX**	Existing PAG-03 Appendix C monitoring requirement with 120.0 mg/l COD benchmark 2025 Application data: See table below. EDMR Data: See compliance section for Outfalls 001 (now 006), 002, and 003
TSS	Report	**IMAX**	Existing PAG-03 Appendix C monitoring requirement with 100.0 mg/l TSS benchmark 2025 Application data: See table below. EDMR Data: See compliance section for Outfalls 001 (now 006), 002, and 003
Total Nitrogen (Total Kjehldahl Nitrogen + Nitrate as N + Nitrite as N measured in the same sample)	Report	**IMAX**	New PAG-03 Appendix C monitoring requirement. Calculated TN from TKN and Nitrate-Nitrite-N values being reported (no additional sampling requirement) 2025 Application data: See table below. EDMR Data: See compliance section for Outfalls 001 (now 006), 002, and 003
Total Kjehldahl Nitrogen (TKN)	Report	**IMAX**	Needed to calculate TN 2025 Application data: See table below.
Nitrate as N	Report	**IMAX**	Needed to calculate TN and also Reuse monitoring parameter in ERMP. 2025 Application data: See table below.
Nitrite as N	Report	**IMAX**	Needed to calculate TN and Nitrate-Nitrite as N 2025 Application data: See table below.
Ammonia-N	Report	**IMAX**	Existing PAG-03 Appendix C monitoring requirement 2025 Application data: See table below.
Total Phosphorus	Report	**IMAX**	New PAG-03 Appendix C monitoring requirement 2025 Application data: See table below. EDMR Data: See compliance section for Outfalls 001 (now 006), 002, and 003

Total Iron	**7.0**	**IMAX**	**Existing monitoring requirement turned into Chapter 95.2 limit due to facility contribution to AMD TMDL loadings in AMD-impacted watershed.** 2025 Application data: See table below. EDMR Data: See compliance section for Outfalls 001 (now 006), 002, and 003
Oil & Grease	**30.0**	**IMAX**	**Chapter 95.2 Limit for Outfall 003/Basin 3 (UGI facility shown present in application) with possibly fueling area.** 2025 Application data: See table below.
Specific conductance	**Report**	**IMAX**	**ERMP reuse parameter included to allow for direct comparison with treated effluent being beneficially used onsite.** Application data: None
Total Cyanide	**Report**	**IMAX**	**New parameter due to use of treated effluent onsite with Pollutant Group effluent Free cyanide concentrations above WQBELs.** Application data: None
Chloride	**Report**	**IMAX**	**New parameter for Reclaimed Water monitoring to allow for direct comparison to fully-treated effluent per Geologist recommendation.** Application data: None

Comments:

- Quarterly monitoring due to seasonal variability of treated effluent reuse onsite.
- IMAX limits due to grab sampling.
- Outfalls No. 004 and 005 were not previously added to the IW Stormwater General Permit PAR502203 (PAG-03) despite installation of new basins onsite. Monitoring required going forward.
- Additional Pollutant Loadings: The Landfill Stormwater Outfalls receive additional pollutant loadings from the beneficial use of fully treated wastewater used outside of secondary containment (dust control, mud control at entrances, use as irrigation for site vegetation, etc.).
- New Total Iron Limits: EDMR data (see compliance section) shows that SW Outfall No. 001 (being redesignated 006) is contributing to AMD impairments in the receiving stream. Chapter 95.2 Total Iron limits are being added to address this issue.
- Breakdown of Stormwater Drainage Areas and Outfalls:

SW Outfall	Description	Drainage Area
001 (now 006)	Sed Pond 1 discharge with ultimate discharge to Swatara Creek	2,357,032 SF (61% impervious); Drainage Area 1 has 54.11 acres. Stormwater from capped sanitary landfill and IWTP (including wastewater and RO Concentrate tanks). 2021 Annual Report indicated unpaved roads and capped/partially capped landfill areas. SW-1 is not located at the sed basin 1 Outfall, but is located at the intermittent stream flowing to main branch of Swatara Creek. BMPs: Stormwater basin & sed traps per 2021 Annual Report
002	Sediment Pond 2 discharge to Swatara Creek	4,322,023 SF (53% impervious); Drainage Area 2 has 99.22 acres. Stormwater from capped sanitary landfill. 2021 Annual Report indicated unpaved roads and capped/partially capped landfill areas. Paved parking per 2023 PAG-03 NOI renewal application (superseded). BMPs: Stormwater basin & sed traps per 2021 Annual Report
003	Sediment Pond 3 discharges to Middle Creek	1,862,190 SF (67% impervious); Drainage Area 3 has 42.75 acres. Stormwater from capped sanitary landfill, maintenance garage, **fueling area**, paved parking, and truck staging area. UGI operation within area per drawings.

		BMPs: Stormwater basin & sed traps per 2021 Annual Report
004	Sediment Pond 4 discharges to Swatara Creek, not in PAR permit previously	1,955,844 SF (58% impervious); Drainage Area 4 has 44.90 acres. Stormwater from capped sanitary landfill and appears to overlap part of Southern MSW Expansion area. BMPs: Stormwater basin
005	Sediment Pond 5 discharges to Gebhard Run, not in PAR permit previously	2,738,617 SF (78% impervious); Drainage Area 5 has 62.87 acres Stormwater from capped sanitary landfill, cover material stockpile, and gas flares and appears overlap part of Southern MSW Expansion area. BMPs: Stormwater basin SW-4: Outside of Drainage Area 5, no Outfall correlation
007	Access Road (Commonwealth Road) from SR 25 to address any usage of treated effluent for dust control & mud removal	**New** Route 25/Commonwealth Road Site Entrance Road intersection, with topography directing flow to Gebhart Run per NHD Locator. Not part of any application-identified drainage area. Fully treated wastewater will be used to control mud at the landfill entrances. Access road may also be used by Mining traffic. BMPs: None identified Lat: 40.665408°; Longitude: -76.378174°
008	Access road from SR-25 in addition to main access road to address any usage of treated effluent for dust control & mud removal	**New** Route 25 site access Road intersection, with topography directing flow to Gebhart Run. Not part of any application-identified drainage area. Fully treated wastewater will be used to control mud at the landfill entrances. Access road may also be used by Mining traffic. BMPs: None identified Lat: 40.665441°; Longitude: -76.376500°
009	Access road from SR-25 along eastern side of landfill, shown on topo, figures (through Schuylkill Recycling Area), and aerial photo as Commonwealth Road.	**New** Route 25 site access Road intersection, with topography directing flow to Gebhard Run. Not part of any application-identified drainage area. Fully treated wastewater will be used to control mud at the landfill entrances. Access road may also be used by Mining traffic. BMPs: None identified Lat: 40.664887°; Longitude: -76.366759°

2025 Application Stormwater Sampling Data: Outfalls 004 and 005 had only one sample result. Benchmark or WQS exceedances bolded.

Constituent	Outfall 001 (now 006)	Outfall 002	Outfall 003	Outfall 004	Outfall 005
pH (SU)	6.36 - 8.15	6.31 - 6.84	6.80 – 7.18	5.22	6.30
O&G	<1.5 avg/max	<1.5 avg/max	2 avg/max	2	2
BOD5	5 avg/max	5 avg/max	1.8	8	3
COD	31 max <22 avg (6)	44 max <28 avg	83.5 max <32 (6)	65	12
TSS	16 max <8 avg (6)	58 max <29 avg (6)	**212 max** 49 avg (6)	**401**	86
TN	1.17 max 0.83 avg (4)	1.94 max 1.30 avg (4)	4.96 max <1.84 avg (4)	-	-
TP	<0.1 mg/l max <0.09 avg (5)	0.202 max <0.1 avg (5)	0.342 max <0.1 avg (5)	0.46	0.04
Aluminum	0.141	0.156	0.133	**3.25**	0.968
Manganese	0.0428	0.166	0.204	**1.2**	0.241
Zinc	0.0087	0.0334	0.0142	0.21	0.0254
Iron	**13.9 max** **9.83 avg (6)**	**2.46 max** 1.16 avg (6)	**5.41 max** **1.90 avg (6)**	**4.2**	1.46
a-Terpineol	<0.0001	0.0001	0.0001	0.0001	0.0001
Benzoic Acid	<0.00206	0.00206	0.00204	0.00028	0.0023
p-Cresol	<0.00021	0.00021	0.0002	0.0005	0.0004
Ammonia-N	0.65 max	2 max	<0.400 max	**2.85**	0.16

	0.47 avg (6)	<0.50 avg (6)	<0.2 avg (6)		
Nitrate-Nitrite	**1.77**	<0.02	<0.02	**2.60**	0.30

- See Compliance Section for available EDMR data (SW Outfall Nos. 001, 002, and 003).

Outfall No.	101	**Design Flow (MGD)**	0
Latitude	40º 39' 55.00"	**Longitude**	-76º 23' 8.00"
Wastewater Description:	Raw Influent to IWTP		

Permit Limits & Monitoring Requirements:

Parameter	Limit (mg/l unless otherwise specified)	SBC	Model/Basis
Flow	Report MGD Report MGD	Monthly Average Daily Max	To monitor influent loadings on 0.090 MGD hydraulic capacity IWTP.

Other Comments: This is to allow EDMR reporting of average and daily max influent flows to the IWTP at sampling location shown on application figures.

Outfall No.	102	**Design Flow (MGD)**	NA
Latitude	40º 39' 55.00"	**Longitude**	-76º 23' 8.00"

Wastewater Description: Reclaimed Treated Wastewater for onsite usage

Permit Limits & Monitoring Requirements (Class A Reclaimed Usages involving public exposure):

Parameter	Limit (mg/l unless otherwise specified)	SBC	Model/Basis
pH	**Report SU 9.0**	**Inst. Min IMAX**	**New Chapter 95.2 limit. CES-proposed monitoring constituent.**
BOD5	**2.0 5.0**	Monthly Average IMAX	**Required Class A reclaimed water usage parameter (i.e. with public exposure)** EDMR is unclear if met due to <6 mg/l BOD5 reporting.
Fecal Coliform	**2.2/100 ml 23/100 ml**	Monthly Average IMAX	**Required Class A reclaimed water usage parameter (i.e. with public exposure)**. EDMR indicates this limit is being met.
Nitrate as N	**Report Report**	**Monthly Average IMAX**	**New CES-proposed monitoring requirement.**
Ammonia-N	**Report Report**	**Monthly Average IMAX**	**New CES-proposed monitoring requirement.**
Specific conductance	**Report µmhos/cm Report µmhos/cm**	**Monthly Average IMAX**	**New CES-proposed monitoring requirement.**
Total Cyanide	**Report Report**	**Monthly Average IMAX**	**New parameter due to Free cyanide concentrations above WQBELs for NPDES permit discharge to Outfall 001.**
Turbidity	**Report NTU Report NTU**	**Monthly Average IMAX**	**See below. Required Class A reclaimed water usage parameter (i.e. with public exposure)**
TOC	**Report Report**	**Monthly Average IMAX**	**See below. Required Class A reclaimed water usage parameter (i.e. with public exposure)**
TOX	**Report Report**	**Monthly Average IMAX**	**See below. Required Class A reclaimed water usage parameter (i.e. with public exposure)**
TN	**Report Report**	**Monthly Average IMAX**	**See below. Required Class A reclaimed water usage parameter (i.e. with public exposure)**
Chloride	**Report Report**	**Monthly Average IMAX**	**New parameter for Reclaimed Water monitoring per Geologist recommendation.**

Other comments: This internal monitor point/outfall is for use of reclaimed (fully treated) wastewater for approved beneficial usages onsite.

- **Class A Reclaimed Water (fully-treated effluent) Usage Requirements with public exposure**: The following additional Class B usages (with potential public exposure) is allowed for use of fully-treated wastewater for building usage (sinks) and residential vehicle washing (vehicle/tire wash if DEP Waste Management, DEP Air Quality, and MSHA/OSHA are notified in writing of usage at least thirty (30) days prior:

Constituent	Average Monthly	IMAX	Monitoring Frequency
BOD5	<2.0 mg/l	5.0 mg/l	Weekly when discharging
Turbidity	≤2 NTU	5 NTU	Continuous
Fecal Coliform*	<2.2/100 ml	23/100 ml	2/week when discharging
pH	Report Inst Min (SU)	9.0 (SU)	Weekly when discharging
Nitrate-N	Report mg/l	Report mg/l	Weekly when discharging

Ammonia-N	Report mg/l	Report mg/l	Weekly when discharging
Total Cyanide	Report mg/l	Report mg/l	Weekly when discharging
TOC	<10.0 mg/l	Report mg/l	Weekly when discharging
TOX	<0.2 mg/l	Report mg/l	Weekly when discharging
Total Nitrogen	<10.0 mg/l	Report mg/l	Weekly when discharging
Chlorine**	-	>0.02 mg/l detectable chlorine residual at point of reuse application	Weekly when discharging

*Monitored at discharge from Treated Wastewater Tanks.
**Where chlorine is used as supplemental chlorination for disinfection. A total chlorine residual of at least 1.0 mg/l should be maintained for a minimum contact time of 30 minutes at design average flow. The treatment facility should provide continuous on-line monitoring for chlorine residual at point of reuse.

Communications Log:

9/30/2016: DEP (Central Office) Letter to all PAG-03 permittees (mailed specifically to CES) regarding updated PAG-03 IW Stormwater General Permit updates and applicable new conditions effective September 24, 2016.
10/28/2016: CES (EarthRes Group) Letter with comments on future draft NPDES Permit.
11/8/2016: Draft NPDES Permit issued for public comments.
11/17/2016: CES (EarthRes Group) Letter with comments on Draft NPDES Permit
11/30/2016: CES (Brett Dexter) Letter with comments on Draft NPDES Permit.
4/19/2018: Onsite meeting discussion of Wastewater reuse requirements (including dust control usage). No detailed meeting notes found in application file.
10/18/2019: CES (EarthRes Group) Letter with comments on Draft NPDES Permit.
3/10/2025: Technical Deficiency Letter (restarting NPDES Permitting and requesting an updated NPDES Permit Renewal Application via Public Upload).
4/3/2025: CES (Jennifer Taylor) E-mail request for an in-person meeting with the Department to discuss the comments provided in the Technical Deficiencies letter dated March 10, 2025 associated with the NPDES Permit Application No PA0065307. “In addition, we would like to discuss the feasibility of permitting for alternate discharge scenarios”.
4/4/2025: DEP (Berger) E-mail asking for detailed meeting agenda bullets and list of participants for the CES-requested meeting to allow for a productive meeting.
4/9/2025: CES (DeNaples) E-mail asking for extension to 10/31/2025 for response to 3/10/2025 Technical Deficiency Letter, and indicating that CES would be providing a separate response to the 4/4/2025 DEP (Berger) E-mail request for proposed in-person meeting for this project. This e-mail request was based on an evaluation of the amount of deficiencies outlined, CES allotting time to finalize the consultant(s) assignment, scheduling and completing the Department guidance meeting and the subsequent response preparational time period. Based on the above items that may include additional commentary from the anticipated Department’s guidance meeting.
4/14/2025: DEP (Berger) E-mail granting extension and noting various things that could be done to allow for a productive meeting.
4/28/2025: CES (Fields) E-mail with proposed Meeting Agenda
5/6/2025: DEP (Dudick) E-mail scheduling requested meeting.

5/20/2025: CES-Requested Meeting Highlights:

- DEP Participants:
  - CW: Amy Bellanca, Edward Dudick, James Berger, and John Hannigan
  - Waste: Tracey McGurk, Dave Matcho, and Brad Lester
- CES Participants: Mike Piepoli – CES; Frank Wanko – CES; Dominick DeNaples – KSL/CES; Albert Magnotta – KSL/CES Consultant; Dave Osborne – KSL; Jennifer Taylor – EARTHRES. Bill Snyder (CES consultant Geologist) was not present.
- Permit Status:
  - IW stormwater permit will be merged into Individual IW NPDES Permit. Department plans to redraft the NPDES Permit after receiving response to 3/10/2025 DEP Letter.
  - They need to see if IWTP has changed from original 2011 WQM permitting and update WQM Permit as needed. There was a 2019 MSW Landfill permit amendment that identified some changes to the IWTP. CES also indicated it had somewhat changed the treatment process (eliminating pre-treatment and doing more filtration) which should be documented. The revised NPDES Permit application should explain all changes. A future WQM permit amendment can permit any site changes from 2011 WQM Permitting. It was noted that DEP Inspectors look at whether a facility is complying with its WQM permits. CES indicated no further plans to modify the 0.090 MGD IWTP at present, but they could pursue higher discharge rate now in the NPDES Permit renewal.
- 0.090 MGD Wastewater Treatment Plant Status:
  - They do not think they need more IWTP capacity now or in future based on a recent HELP Model analysis (MSW leachate estimation computer program). The Department noted that if 3-month max monthly average flow reached >0.090 MGD, then the facility should be looking at a IWTP expansion or other action, since that meets the definition for hydraulic overloading. DEP noted they can propose higher discharge rates since the receiving waters are not subject to special protection (HQ or EV).
  - All site leachate goes through the IWTP RO process, including any discharge to SCMA Gordon POTW. CES is negotiating with SCMA Gordon for more capacity (~60,000 GPD total) and indicated SCMA Gordon will be updating its requirements for any discharge (from the previous 1990s requirements). DEP noted SCMA Gordon has indicated capacity issues with a February 16, 2024 Act 537 Planning Letter for

WWTP expansion (from 0.600 MGD to 1.5 MGD, with the former Butler WWTP being converted into a pump station to SCMA Gordon), so it is unclear what additional capacity is available now for CES.
  - CES has not been discharging to SCMA Gordon since they can use all site-generated treated effluent for dust control onsite.
  - They have one RO treatment train (RO units Nos. 1, 2, and 6 (high pressure RO treatment for the RO Concentrate). They have replacement RO membranes on order, but they are held up in transit, etc. They want to replace the existing membranes prior to doing any application resampling & analysis. They have been trucking leachate and RO Concentrate offsite while waiting for the replacement membranes.
  - The existing leachate tanks (two 1.5 MG tanks for raw leachate and 1 MG for treated effluent) were installed in the 1990s. The 1 MG tank is used to store the fully-treated effluent (prior to dust control usage or going to SCMA Gordon), with about 200,000 gallons used for operational reasons. The 2 (1.5 MGD) tanks store the raw leachate when higher flows are generated for use when needed during dry periods.
  - CES noted that it uses rain tarps and temporary liners to keep precipitation from contacting the protective cover (waste) in newly constructed cells. The collected precipitation is directed to the stormwater controls, not the IWTP.
- Beneficial Use of Treated Effluent:
  - Only fully treated effluent meeting NPDES Permit limits can be used for dust control onsite per the NPDES/WQM permit requirements. The NPDES and WQM permits have overlapping requirements for beneficial use of fully-treated effluent for dust control. A Draft January 2018 Leachate Reuse Monitoring Plan had been submitted, followed by an April 2018 site visit where it was discussed. The DEP Tech Def letter incorporated comments on the Leachate Reuse Monitoring Plan.
  - The Department indicated it was concerned over over-usage of dust control water (i.e. turning into spray irrigation). CES needs to better define when it should not be using dust control water and can update its January 2018 Leachate Reuse Monitoring Report calculations to address reduced usage on paved roads, no usage on blocked off access roads, when precipitation amounts stops usage of dust control water, etc. CES noted that it has more roads since 2018, and that it has needed to use the fully-treated effluent to wash off mud on the roads (including access roads) during frozen conditions in winter, washing mud off entrance road, etc. Mining would have to separately okay any usage of treated effluent for dust control on the Mining Permit areas.
  - DEP noted that it was concerned about consistency of the fully-treated effluent. Normally, there is much more data available on treated effluent quality/consistency for beneficial uses of treated wastewater. The NPDES permit requires weekly monitoring for NPDES permit parameters for fully-treated wastewater (leachate, etc.) to verify consistency, but there is no EDMR data available because of no stream discharge. There is no SCMA Gordon sampling data since none has been discharged to the POTW for years. The MSW Landfill Form 50 raw leachate data does not address all NPDES constituents of interest, does not address the treated wastewater, and monitoring is too insensitive (50 ug/l for some organics). The WQM permit-required sampling (TSS, BOD5, Fecal Coliform) is too limited to show wastewater consistency. The 2018 EDMR data showed the facility had exceedances when discharging back then. There were questions about the proposed 2018 Leachate Reuse monitoring plan (GW wells, surface water monitoring points, etc.). CES is free to provide additional sampling & analysis data to make the case for reduced monitoring requirements, and might address the Form 50 (plus additional constituents while meeting TQLs). CES showed some weekly wastewater sampling results (metals, etc.) that they had, but it is limited. The Department also recommended that they resample for all NPDES Pollutant Group 1 through 7 parameters, not just the ones that triggered potential limits/monitoring requirements.
  - DEP asked about reported elevated nitrate levels in the groundwater. CES blamed the source on cover soils from Natural Soil Products. They have stopped using the NSP materials. DEP asked for any quantitative determination and information be submitted with the revised NPDES Permit application.
  - DEP noted the site has both surface and groundwater divides into three different watersheds (Swatara Creek. Middle Creek, etc.) which complicates potential monitoring requirements. Several of the surface streams tend to disappear downstream, but there is aquatic life at the discharge points. DEP noted the treated effluent discharge might benefit the receiving surface streams that tend to dry out downstream. There is a reservoir downstream on one of the receiving streams. DEP is concerned that some areas might not be adequately monitored, such as the site entrance road (as discussed in the DEP Letter).
  - CES wants to use treated effluent in their buildings (Main office and Maintenance building) for non-potable water instead of AMD-impacted well water. They currently use AMD-impacted well water (orange staining, sulfur smell) for non-potable water (sinks and toilets). They use bottled water only for potable water purposes. The DEP said this might be allowable, but the Safe Drinking Water program might have some additional requirements for such usage (signage, backflow prevention, etc.). CES says it already has signage and there is no potable water piping there. The odor is noticeable when they turn on the taps, but they do not think there is an odor coming from the AMD-impacted source well itself.

- CES said that the AMD well water is used also when there is insufficient treated effluent for dust control, truck wash water, etc. during drought conditions. The SBRC charges them for the AMD well water withdrawal.
- CES indicated it uses the treated effluent for the site truck wash. The truck wash has 10,000-gallon tank.
- CES wants to use treated effluent within the lined landfill areas. DEP said this might be allowable, but DEP Air Quality and Waste Management should be contacted since there would be additional public exposure (i.e. commercial truckers, visitors, etc.). There is more potential public exposure than on the access roads (where people would be in trucks, etc.).
- CES noted that it does spread RO Concentrate on the landfill working face via dedicated truck.
- DEP Waste Management had asked for clarification on dust control volumes and usage areas in the NPDES monitoring & reporting. CES noted it would provide drawings showing dust control usage area (by shading, etc.).

- Other Potential Discharge Scenarios:
  - Direct Discharge of Treated Effluent to the Mine Pool (UIC Injection Well): CES indicated it would not pursue this concept.
  - Direct Discharge of Treated Effluent to an Anoxic Mine Water Drain: A local group (with Benesch as their engineer) has been in contact with CES about doing a remediation project for an onsite Orphan AMD spring/seep. CES had helped place limestone there to reduce AMD impacts years before, and might contribute more labor, materials, and treated effluent for an enhanced mine drainage remediation system. DEP noted that they should contact Mining about permitting such a system. If CES added it to the NPDES Permit, then they might be taking on permanent responsibilities for the Orphan Mine discharge.
- Schedule:
  - DEP noted Central Office is pushing to eliminate all backlog projects, and questions had been raised for why it would take until 10/31 for a revised application.
  - CES said they needed to replace the RO System membranes prior to any resampling, with their membranes being held up and not delivered. CES will look at its schedule and when it can submit the revised application. CES will then provide an explanation for the public record for the delay.
- Other:
  - Application sampling: CES asked if they would have to analyze for all application constituents in the future NPDES Permit. The NPDES Permit application pollutant group table sampling allows the Department to determine what is present that requires monitoring and/or limits. The EPA Sufficiently Sensitive Rule requires the DEP to treat any insensitive ND level (not meeting DEP TQLs) as the constituent being present at the insensitive ND concentration. If ND at DEP TQL (and more sensitive lab QL/MDL), the constituent is assumed to be absent. If detected below the DEP TQL, some constituents trigger permit limits or monitoring due to how poisonous they are.
  - IW Outfall No. 001 Sampling Point: CES does not have to sample at the IW Outfall 001 location on the stream itself. Most facilities have a sampling point after the last treatment unit (disinfection or other). As long as the sampling point allows for representative sampling, it can be installed as a process control and noted in the revised NPDES permit application.
  - MSW Landfill Southwestern Expansion:
    - DEP CW cannot permit the proposed Southwestern Expansion prior to the other programs (Waste Management Program MSW Landfill, etc.). CES needs to explain what will be changed onsite in the next 5-6 years in the revised IW NPDES Permit application (outfalls, sed basins, IWTP changes, etc.), so DEP can try to address them (if possible) in the Redraft NPDES Permit to avoid unnecessary permit amendment requirements. Anything after that would be addressed in the next NPDES Permit Renewal. Otherwise, CES can always submit a Major NPDES permit amendment to address any needed permitting changes during the 5-year NPDES Permit term. CES said it can explain what will change onsite over the next 5 – 6 years.
    - The NPDES Permit Application and SW Expansion Application have to be consistent. DEP CW did a glance-over of the pending SW Expansion Application and noted conflicts that might be due to terminology or definitional issues that should be cleaned up. Conflict whether pre-treated or fully-treated leachate can be used for dust control. Conflict whether spreading RO Concentrate on the working face is “leachate recirculation” or not. Etc. The DEP Waste Management Program concurred that the applications must be consistent.
    - It was noted that the SW Expansion involves a lot of mining activities/quarrying (under the Mining Permits) that will have impacts on infiltration, groundwater flows, etc. with implications for the monitoring programs, etc.
  - Separate Throop project discussion (same principals): KSL is working with LRBSA and Throop Borough on an Act 537 Planning submittal to allow for KSL wastewater to go to the POTW. A WQM permit application can be submitted after planning approval is issued. KSL explained the current status of the

project. DEP thanked KSL for the update, as different parties had been asking about the status of the project.

- **5/30/2025**: CES (Jennifer Fields) E-mail proposing additional upfront weekly sampling to help quantify treated effluent quality consistency for beneficial use of treated effluent for dust control, and asking for DEP input/concurrence. The proposal included:

Parameter	Frequency	Type of Sample
From special conditions in WQM Permit No. 5411403, per DEP Reuse Guidance		
BOD5	1/week	Grab
TSS	1/week	Grab
Fecal Coliform	1/week	Grab
Other Recommended Parameters		
pH	1/week	Grab
Specific Conductivity	1/week	From RO Unit
NO3-N	1/week	Grab
Ammonia-N	1/week	Grab

Stormwater samples will be analyzed for the parameters above plus any additional parameters identified in the sites existing stormwater discharge permit that aren't listed in the table.

- **6/3/2025**: CES (Dominic DeNaples) E-mail indicating response to DEP Technical Deficiency letter will be submitted by 8/15/2025.
- **6/27/2025**: DEP (Berger) E-mail response to 5/30/2025 CES E-mail regarding monitoring requirements. Excerpts:
  - For NPDES permitting purposes, the Department cannot give any confirmation of adequacy in the absence of a complete and technically adequate IW NPDES Permit Application including the updated influent/effluent sampling data, stormwater sampling data, any other historical influent/effluent data available (weekly CES metals, etc. monitoring was mentioned at the May 20, 2025 meeting), and updated Leachate Reuse Monitoring Report/Plan including updated surface/groundwater monitoring system/plan information. The Department will be making these determinations during the technical review of the future revised IW NPDES permit application. As discussed at the May 20, 2025 Meeting, the Department lacks information on treated wastewater quality and consistency/variability at this time.
  - At the May 20, 2025 Meeting, there was a discussion about concerns of treated wastewater variability and the potential monitoring requirements. As discussed, CES is free to provide additional sampling & analysis data to make the case for reduced monitoring requirements, and might address the MSW Landfill Form 50 (quarterly Untreated Leachate Monitoring report) constituents plus additional constituents while meeting TQLs.
    - The Department is enclosing a draft DEP Clean Water Supplemental Report Form (Untreated Leachate Monitoring Report) which incorporates most Form 50 constituents (and additional constituents for NPDES permitting) to clarify the constituents of interest and future minimum screening levels. (The EPA Sufficiently Sensitive Rule requires the Department to treat any insensitive ND concentration reported as the constituent being present at the insensitive ND level not meeting DEP TQLs, i.e. can trigger additional permit requirements when TQLs are not met.)
  - See the IW NPDES Permit Application Module 1 (Stormwater), available via DEP E-library) for stormwater sampling & analysis & other informational requirements. The Department reviews the Module 1-required information to determine what monitoring requirements are required in the NPDES Permit.
- **7/22/2025**: DEP (Berger) E-mail notifying CES of updated NPDES Permit Application form (now including free cyanide analysis requirements) and noting cyanide issues had come up with the similar (withdrawn) Keystone Sanitary Landfill NPDES Permit application.
- **8/19/2025**: Partial Updated Application received via DEP Public Upload, but missing influent/effluent/stormwater sampling data with uncompleted related application sections. **NOTE**: CES called the week before and indicated the submittal would be submitted on the following Tuesday (8/19/2025).
- **9/24/2025**: Public Upload# 348482 (updated Pollutant Group Tables and stormwater sampling tables) received.