pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

Application Type	**New**	Application No.	**PA0276120**
Facility Type	**Storm Water**	APS ID	**964362**
Major / Minor	**Minor**	Authorization ID	**1221963**

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

Applicant and Facility Information

Applicant Name	**Slate Belt Heat Recovery Center LLC (SBHRC)**	Facility Name	**Slate Belt Heat Recovery Center (SBHRC)**
Applicant Address	435 Williams Court Suite 100	Facility Address	2100 Block Of Pen Argyl Road
	Baltimore, MD 21220-2888		Pen Argyl, PA 18072
Applicant Contact	John Goodwin	Facility Contact	John Goodwin
Applicant Phone	(443) 489-9069	Facility Phone	(443) 489-9069
Client ID	341865	Site ID	256036
SIC Code	4953	Municipality	Plainfield Township
SIC Description	Trans. & Utilities - Refuse Systems	County	Northampton
Date Application Received	March 21, 2018	EPA Waived?	Yes
Date Application Accepted	August 1, 2018	If No, Reason	-

Purpose of Application: NPDES Permit for Individual IW Stormwater.

Summary of Review

This is an Individual IW Stormwater NPDES Permit for an unbuilt "biosolids processing facility" (using heat/oil from the existing adjacent Green Knight Economic Development Corporation (GKEDC) LFG-to-Energy facility for drying purposes), located within the Grand Central Sanitary Landfill facility (MSW ID# 100265; NPDES Permit # PA0070483) property/permit areas, and discharging to the GCSL Sediment Basin No. 2 with ultimate discharge to Waltz Creek (CWF; Stream Code# 63243) watershed (with one facility area directing stormwater to GCSL stormwater controls/UNT to Little Bushkill Creek (HQ-CWF)).

- **Permit Coordination**: This permit application review is being coordinated with other DEP Programs and permits. There was an 11/28/2017 Pre-application Meeting for this project, involving permit coordination with sister DEP Programs (DEP Waste Management, DEP Air Quality, General Permit for beneficial use of Class A biosolids products/fuel, etc.). The applicant does not foresee any other DEP permitting requirement and/or zoning requirement impacting overall stormwater management onsite. In terms of related permits and permit applications:
  - **GCSL Minor Waste Modification (MSW Landfill ID# 100265)**: DEP Waste Management has received an application for permit modification to cover the modification of the existing Sedimentation Basin No. 2 (part of existing GCSL stormwater controls) involving partial filling and relocation of emergency spillway; other earthwork within the GCSL permit area relating to the SBHRC permit area; and any impacts of the proposed co-located SBHRC industrial activities on GCSL operations (use of common access roads, scales, etc.). **DEP Waste Management indicated the SBHRC area will remain part of the GCSL permit area, and that the related earthwork will be covered by their permit. The DEP Waste Management obtains DEP Waterways & Wetland Program input for projects involving earth disturbance, changes in stormwater runoff conditions, and construction stormwater controls.**
  - **Biosolids GP Application for SBHRC (GP ID# WMGR160)**: DEP Waste Management has received an application for General Permit for the processing and beneficial use of biosolids (sewage sludge) for land application and fuel.

Approve	Deny	Signatures	Date
X		James D. Berger, P.E. / Environmental Engineer	September 18, 2018
X		Amy M. Bellanca, P.E. / Environmental Engineer Manager	

Summary of Review

- **PADEP Air Quality applications**: PADEP Air Quality has received applications for GKEDC and SBHRC air emissions related to this project.
- **GCSL NPDES Permit # PA0070483 (Discharges from GCSL IWTP outfall and GCSL Stormwater outfalls)**: **No pending application. The GCSL NPDES Permit will require updating after SBHRC construction activities are completed:**
  - **This project will render the previous GCSL NPDES Permit Renewal application information partially obsolete. The existing GCSL NPDES permit covered the GCSL/GKEDC stormwater going into the existing Sedimentation Basin No. 2, which was presumed not to discharge to a free-flowing stream based on GCSL assurances. The application noted that the GCSL Outfall No. 012 was for a Basin No. 2 barrel riser discharge that was never constructed. Therefore, the previous GCSL Stormwater Outfall No. 012 (Sedimentation Basin No. 012) and GKEDC facility area was previously removed from the NPDES permit list of approved stormwater discharges and monitoring/reporting requirements. The SBHRC project is reducing the Sedimentation Basin No. 2 capacity, and the Basin must now be presumed to discharge via its emergency spillway to Waltz Creek. SBHRC has agreed to conduct additional stormwater outfall sampling to differentiate between impacts from the GCSL landfill drainage areas and GKEDC facility area.**
  - **No existing stormwater outfall data is available yet. If future stormwater data shows evidence of impacts from non-SBHRC area stormwater, it would trigger both corrective action requirements and NPDES permit amendment requirements to incorporate additional stormwater outfalls/monitoring requirements directly into the GCSL NPDES permit.**
  - **Figure 2B indicated Sedimentation Basin No. 2's emergency discharge would previously direct discharges to the GCSL stormwater controls and the UNT to Little Bushkill Creek. GCSL Stormwater Outfall 012 was located adjacent to the GCSL Sedimentation Basin No. 7 outfall discharge point to that control.**
  - **Figure 2B shows the majority of existing GKEDC stormwater runoff is directed to Sediment Basin No. 2, with other side of existing buildings directing flow to the GCSL stormwater controls directing the flow to the UNT to Little Bushkill Creek.**

- **Public Hearing/Meeting**: A multi-program hearing/meeting has been scheduled for November 7, 2018.
- **Public Comments**: Public comments have raised zoning and other issues. Those issues within the scope of this permit application have been addressed in this review. See Communication Log for brief summarization of public comments received as of August 15, 2018.

Background Information:

- **SBHRC Drainage Areas: See Table 1 description below.**
- Identified SIC Codes: The facility drainage area/outfalls will receive flows from co-located facilities (GKEDC and GCSL):
  - SBHRC: SIC Code #4953.
  - Green Knight LFGTE Facility: SIC Code# 4911
  - GCSL (MSW Landfill): SIC Code No. 4953 under IW NPDES Permit No. PA0070483 for 0.100 MGD discharge from IWTP (treated leachate, with fecal coliform limits) and landfill stormwater outfalls. In terms of GCSL NPDES stormwater outfalls:
    - Former GCSL Stormwater Outfall No. 012 is not authorized to discharge under the current GCSL NPDES Permit, but drainage area is subject to overall NPDES Permit requirements.
    - Stormwater Outfall No. 003 discharges to Waltz Creek from Sediment Basin No. 3.
    - Other permit listed stormwater outfalls were indicated to discharge to the UNT to Little Bushkill Creek:
      - Stormwater Outfalls #004 (Sed Basin #4),
      - Outfall #005 (Sed Basin #5),
      - **Outfall #007 (Sediment Basin #7) which is the closest sedimentation basin to new Basin #2 spillway, and discharges to the GCSL stormwater controls receiving SBHRC Drainage Area 006 flows.**
      - Outfall #008 (Sediment Basin #1)
      - Outfall #009 (Sediment Basin #8)
      - Outfall #011 (Sedimentation Basin #5)

Summary of Review

- Facility Description: The application-estimated 524,898-square foot facility (Total site drainage area, with a 48.5% impervious area). is located within the GCSL property and landfill permit boundary, and within the contributory drainage area of Sediment Basin No. 2, described as an existing, permitted, engineered non-discharging stormwater control pond). The project site is located adjacent to the Green Knight Economic Development Corporation (GKEDC). The current SBHRC site is currently undeveloped and existing runoff enters Sediment Basin No. 2.
    - Building: The ~20,446 square foot biosolids processing building will include the two (2) fully enclosed belt dryers in parallel. The dryers will use waste heat from the adjacent GKEDC LFG facility. The dryers and associated equipment will be enclosed. There will be dry product storage silos, a covered biosolids receiving unit, truck load-out station, and an outside 300,000-gallon AST wastewater storage tank onsite.
    - Truck Receiving Area: The 2,400 Square Foot (1.95-foot deep) containment area under the truck tipping equipment can contain up to 35,000 gallons. The application estimated that a 25-year storm would only generate 9,000 gallons storage requirement.
    - Class A Product Load-Out Pad: The 1,430 Square Foot area, partly covered by product silos with open-end truck access. Containment will be provided for the entire product load-out process. Drains are provided to allow any water to drain to the sump and be conveyed to the process wastewater tank.
    - Thermal Oil Heater Pad: Will be housed under a canopy, with containment provided for the thermal oil tank and piping per National Code and/or Federal, State, and Local regulations.
    - Wastewater Containment Tank (surrounding the wastewater tank; with a "valve sample nozzle"): The application states: "If the captured stormwater is within the allowable limits established in the NPDES permit it will be discharged and flow into Sediment Basin No. 2". If above the limits, the collected precipitation will be pumped into the wastewater tank prior to being hauled offsite for disposal.
    - Existing GCSL Sediment Basin No. 2: Will be partially filled in and regraded for SBHRC construction. Will then receive facility stormwater runoff.
- Facility Process Description: At full production, the facility will process 400 wet tons/day of (dewaterd) biosolids to produce ~84 dry tons/day (@21% solids) Class A biosolid product that will be beneficially used as a (Class A Exceptional Quality land application) fertilizer, blending agent, soil conditioner, and/or renewable fuel product in a 12.05-acre property parcel within the GCSL landfill.
    - Process wastewater will be shipped offsite for treatment/disposal.
    - Site-generated sanitary (restroom/shower, etc.) wastes will be directed to the Penn Argyl Municipal Authority (PAMA) sewer collection system/treatment plant.
- Truck traffic: Incoming biosolids will be weighed on the GCSL scales, and then taken to the SBHRC processing facility where they will be deposited into a covered receiving unit. The biosolids will then be conveyed into the processing facility and dried "using heat recovered and transferred into thermal oil at the adjacent GKEDC facility". Dried biosolids are conveyed into storage silos and then transported from the facility to end users". The overall facility truck traffic can be estimated at the following in/out volumes:
    - 400 TPD Incoming biosolids: 20 trucks at 20 tons each.
    - 84 TPD outgoing product: 4 – 5 trucks at 20 tons each
    - 90,000 GPD wastewater leaving: 18 trucks at 5,000 gallons each. The 300,000-gallon process wastewater tank will fill up every 3.3 days or so at max intake (not counting washwater or containment area volumes).

Special Permit Conditions:

- **Part C.I through C.V: Standard Stormwater Conditions**
- **Part C.II.E (Sector- and Site-Specific BMPs): BMPs from the following sources:**
    - **Liquid Recycling Facilities due to potential liquid fraction of incoming biosolids: Waste Material Storage (Indoor); Waste Material Storage (Outdoor); Trucks and Rail Car Waste Transfer Areas**
    - **Non-liquid Recycling Facilities BMPs due to non-liquid fraction of biosolids: Vehicle and Equipment Maintenance**
    - **Site-specific BMPs: Application-identified BMPs from application(s)**
- **Part C.VI.A: Necessary Property Rights**
- **Part C.VI.B: Residuals Management**
- **Part C.VI.C: Process Wastewater Tank Release of Collected Precipitation: Prior to any discharge of collected precipitation from the Outside Process Wastewater Tank Secondary Containment Area, the permittee shall submit a site Standard Operating Procedure (SOP) for Department review and approval or approval with conditions. The SOP shall describe the facility method of determining that the collected precipitation is not contaminated, any proposed oil sheen removal method, and method of preventing any discharge-caused erosion & sedimentation. No discharge to the environment is allowed in the absence of Department**

Summary of Review

approval.

- **Part C.VII.D: Additional PPC Plan Requirements:**
  - **Fire Contingency Planning: The facility will be generating and storing a combustible fuel product. Additional fire contingency planning, including means to use Basin No. 2 water for fire-fighting must be included in the site PPC Plan.**
  - **Truck Release Scenario: The existing PPC plan is not adequate in showing the facility has the contingency planning and onsite resources to address a major truck release (raw biosolids, site product, or wastewater). The PPC Plan must be updated to adequately address these scenarios.**
  - **Record-keeping: Site-specific issues required clarification on minimum recordkeeping requirements.**

Public Participation

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

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001 – 004; Drainage Areas 005 - 007	Design Flow (MGD)	0 (stormwater only)
	40º 51' 37.30" (001)		-75º 15' 40.42" (001)
	40º 51' 35.85" (002)		-75º 15' 36.34" (002)
	40º 51' 37.30" (003)		-75º 15' 40.42" (003)
	40º 51' 35.08" (004)		-75º 15' 32.75" (004)
	40º 51' 35.85" (005)		-75º 15' 36.34" (005)
Latitude	40º 51' 37.30" (007)	Longitude	-75º 15' 40.42" (007)
Quad Name	Wind Gap	Quad Code	1243 (5.22.2)
Wastewater Description:	Stormwater associated with industrial activities		

Receiving Waters	**Basin No. 2 and Waltz Creek**	Stream Code	63243
NHD Com ID	26066410	RMI	-
Drainage Area	- (Located at headwaters)	Yield (cfs/mi^2)	-
Q_{7-10} Flow (cfs)	-	Q_{7-10} Basis	-
Elevation (ft)	706.25 (basin discharge)	Slope (ft/ft)	-
Watershed No.	1-F	Chapter 93 Class.	CWF, MF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired		
Cause(s) of Impairment	Other Habitat Alterations, Siltation, Water/Flow Variability, Water/Flow Variability		
Source(s) of Impairment	Erosion from Derelict Land, Erosion from Derelict Land, Urban Runoff/Storm Sewers, Urban Runoff/Storm Sewers		
TMDL Status	Final	Name	Waltz Creek TMDL

Background/Ambient Data		Data Source:
pH (SU)	6.6 – 6.9	Waltz Creek TMDL Appendix A - Ambient Water Quality Data TMDL Station 1 (West branch of Waltz Creek) 1998 Ambient Sampling (for headwater conditions) – 4 samples
Hardness (mg/L)	25 – 173	See above
Specific Conductivity:	177 – 473	See above. Units unspecified, Average of 4 samples is 315)
BOD (mg/l)	0.83 – 2.1	See above
TSS (mg/l)	10 - 228	See above
Ammonia-N (mg/l)	<0.02 – 0.07	See above
Nitrate-N (mg/l)	0.47 – 3	See above
Total Phosphorus (mg/l)	<0.02 – 0.13	See above
Copper (ug/l)	<10 - 13	See above
Lead (ug/l)	<1 – 21.8	See above
Zinc (ug/l)	<10 - 18	See above
Aluminum (ug/l)	<200 – 228	2 samples only
Manganese (ug/l)	<10 - 17	2 samples only
Iron (ug/l)	135 – 218	2 samples only

Nearest Downstream Public Water Supply Intake		North Penn Water Authority	
PWS Waters	Delaware River	Flow at Intake (cfs)	-
PWS RMI	-	Distance from Outfall (mi)	~44 miles per application

Changes Since Last Permit Issuance:

- NA – not previously existing facility.
- **The existing GCSL NPDES Permit did not incorporate any stormwater outfall point (formerly Stormwater Outfall No. 012) for Sedimentation Basin No. 2 due to no discharge reaching the waters of the Commonwealth, but area otherwise subject to all existing NPDES Permit obligations (which will remain in effect for overlapping areas).**
    - **Original Basin No. 2 emergency spillway was to discharge to UNT to Little Bushkill Creek (HQ-CWF), but project will redirect emergency spillway discharge to Waltz Creek (CWF).**
    - **This project is being coordinated with other DEP permits which include basin regrading that will decrease the Basin's available capacity (i.e. increasing potential for future discharges to Waltz Creek during >200-year storm events or equivalent).**
- **Other site stormwater discharges (SBHRC Drainage Area 6 on other side of SBHRC buildings) will be directed into the GCSL stormwater drainage system and UNT to Little Bushkill Creek (HQ-CWF).**
    - **This run-off (roof/lawn area) does not include facility material handling/industrial activity areas.**
    - **Any facility run-off from this area will flow into the GCSL stormwater management system, approximately where GCSL directs Sedimentation Basin No. 7 discharges to the UNT to Little Bushkill Creek downgradient of the SBHRC Drainage Area 6.**

Other Comments:

- **Modified Sedimentation Basin No. 2 Information (from GCSL Application for Mod):** Application-described as "an existing, non-discharging, engineered, permitted, designed stormwater control basin" with outfall, previously removed from GCSL NDPES Permit No. PA0070483. Application did not mention if it will meet the Stormwater BMPs for infiltration basins (DEP ID# 363-0300-002). Available Information:
    - Basin No. 2 Top Elevation: 706.95 Feet Elevation
    - Permanent Pool Elevation: 696.79 Feet Elevation
    - Expected 100-Year/24-hour Storm Event Elevation: 702.07 Feet Elevation
    - Emergency Spillway Elevation: 704 Feet Elevation Inlet; 702.65 Feet Elevation Outlet at Discharge
    - Sed Trap No. 2: "A sediment trap (Sediment Trap No. 2) is constructed adjacent to the basin to pre-treat incoming water and facilitate cleanout of accumulated sediment". This sed trap is located adjacent to Sedimentation Basin No. 2.
    - Dryer Building Elevation: 708.5 Feet Elevation
    - See below for additional Basin history and applicable Standard of Protection
- Other Dischargers to Waltz Creek:
    - Municipal Stormwater Sources in Area: Plainfield Township has downstream stormwater outfalls under MS4 NPDES Permit No. PAI132220. Penn Argyl Borough has stormwater outfalls under NPDES Permit No. PAG132263. These permits should address impacts from urban storm sewers on the receiving streams.
    - Penn Argyl Municipal Authority STP (NPDES No. PA0037052): The PAMA STP flow reaches the main branch of Waltz Creek downstream of this facility.
- Waltz Creek (subject to TMDL):
    - Natural Trout Reproduction Stream: Uncontaminated stormwater does not have a significant oxygen demand (BOD5, CBOD5 or COD) which protects Waltz Creek.
    - General Information from TMDL: Waltz Creek is a tributary to Martins Creek, at river mile 4.48, in the Delaware River drainage. The basin is located in Plainfield and Washington Townships and the Borough of Pen Argyl in Northampton County north of Easton. Waltz Creek flows in a southeasterly direction and drains 11.2 square miles. Waltz Creek impairment is due to: Copper, Lead, and Zinc (in addition to siltation and variable flows/erosion).
    - 8/9/2004 Waltz Creek TMDL (Metals and Sediment): The desired endpoint of the watershed will be such that dissolved metal concentrations attributed to identified potential sources in the watershed remain below the applicable WQS in the stream, at both high and low flows. This endpoint will be reached as a result of expected, though unspecified, reductions in sediment loading from the watershed resulting from implementation of corrective actions and Best Management Practices (BMPs). Achievement of this endpoint is expected to provide full support of the aquatic life function of the Waltz Creek and attain the WQS for dissolved copper, lead, and zinc.
        - Flow Variability & Sediment from Related Construction: The other DEP Programs will address flow variability and sediment issues as part of their technical review of the proposed regrading/construction project being separately permitted.

- Sediment from Facility: The IW Stormwater NPDES Permit will prevent facility stormwater from contributing to any existing sediment problems via Stormwater BMPs, stormwater PPC Plan requirements, and stormwater permit monitoring/limits.
- Metals from Facility (Copper, Lead, and Zinc): The IW Stormwater NPDES Permit will prevent contamination of site stormwater via Stormwater BMPs, stormwater PPC Plan requirements, and stormwater permit monitoring/limits. Outfall No. 002 (discharge of emergency spillway to Waltz Creek) will be monitored for TMDL metals (total metals) and TSS (suspended solids) in event there is a discharge from Basin No. 2 in the future.
- TMDL-estimated Low Flow: Waltz Creek 7Q10 flow (0.22 cfs) was estimated from USGS gage 01446600 "Martins Creek near East Bangor, PA", but that estimate does not correspond to flows expected at the headwaters of the creek.
- TMDL Updating: This NPDES permit will gather information to allow for updating the Waltz Creek TMDL in the future.

- **Additional Basin No. 2-related**:
  - **History and Basin Classification: The SBHRC application(s) indicated the Basin is a water of the Commonwealth that is acting as a stormwater control**:
    - Mining Permit No. 48820501C2: The application indicated the former Doney II Quarry was closed in 2007. The December 17, 2007 PA DEP Mining Program Notice of Permit Correction stated the post-mining land use was corrected from "Water Impoundment" to "Developed Water Resource" (Chapter 77.1 "Land Use – Developed Water Resource": "Land used for storing water for beneficial uses, such as stockponds, irrigation, fire protection, flood control and water supply").
    - MSW Landfill Permit No. 100265: The application(s) indicated the Basin was converted into a "sediment basin and stormwater control facility" under the August 1, 2008 DEP Waste Management Program MSW Landfill Permit Amendment for Grand Central Sanitary Landfill (GCSL). The quarry was partially filled in and an emergency spillway provided. The Basin discharge barrel (discharging to the UNT to Little Bushkill Creek watershed) was permitted but not installed per application. Sediment Trap No. 2 (upslope of Basin No. 2) was also provided to remove landfill cover area sediment prior to reaching the Basin. GCSL separately submitted a MSW Landfill permit amendment application involving modifying the Basin and proposed SBHRC area for this project. The modifications will decrease overall Basin storage/infiltration capacity and relocate the emergency spillway which will now discharge to Waltz Creek. The application indicated the landfill disposal drainage area is capped and revegetated at final grades, hence with little potential for erosion, sedimentation or leachate seeps.
    - GCSL NPDES Permit No. PA0074083: This Basin/stormwater drainage area was subsequently included in the GCSL NPDES Permit No. PA0074083 with GCSL Stormwater Outfall No. 012 at the approved but not constructed Basin No. 2 discharge barrel (discharge to the GCSL stormwater control draining to the UNT to Little Bushkill Creek). The stormwater drainage area included the onsite Green Knight EDC LFG-to-Energy Facility (GKEDC). GCSL Stormwater Outfall No. 012 was subsequently removed from the NPDES Permit due to lack of discharge. The GCSL NPDES Permit has not been updated to reflect site changes discussed in the SBHRC Application for Individual IW Stormwater NPDES permit.
    - Individual IW Stormwater NPDES Permit Application: The Basin was indicated to meet the Chapter 105 definition for "Body of Water" ("A natural or artificial lake, pond, reservoir, swamp, marsh or wetland"). No further incorporation of GCSL Outfall 012 into the SBHRC application or modification to the GCSL NPDES permit was proposed.
- **Protection of the Waters of the Commonwealth: As a water of the Commonwealth, the Basin is subject to all permitting/regulatory protections as a water of the Commonwealth.**
  - **Standard of Protection (Cold Water Fishery):** This application described the Basin as a "non-discharging, engineered, permitted, stormwater control basin". The application noted the (regraded) Basin would contain a 100-year storm event or 200-year storm event without discharging via the existing emergency spillway following construction of the SBHRC facility/Basin modification. However, the (regraded) Basin would still discharge to Waltz Creek via the relocated emergency spillway during unusual weather events. It is therefore considered part of the Waltz Creek Watershed, and subject to the same standard of protection as Waltz Creek. Waltz Creek is a Cold Water Fishery (CWF), subject to the August 9, 2004 Waltz Creek TMDL (Metals and Sediment), and impaired due to impairment sources/causes including siltation and urban runoff/storm sewers.
  - **Additional Permit Requirement**: Discharges to the Basin are subject to the existing GCSL NPDES Permit No. PA0074083 requirements, including the Part A.I Additional Requirements (narrative Technology-Based Effluent Limits).

- **Reuse/Recycling of Basin No. 2 Water**: The Department would allow the facility to use Basin water for dust control, fire-fighting water source, and other incidental outside usage within the Waltz Creek watershed (now including the Basin No. 2 drainage area after basin/site regrading). Discharge to the UNT to Little Bushkill Creek (HQ-CWF) watershed (Drainage Area 6) would require notification/authorization due to the HQ nature of the receiving watershed and uncertainties about potential Basin water quality. Other Plant usages would be subject to the requirements of proposed non-potable water usage and proper management of the resulting wastewater.
- **Overlapping NPDES Permit Protections**: The Basin will be receiving stormwater from multiple facilities. The Application(s) indicated the Basin and Sediment Trap No. 2 will be located in the SBHRC property parcel, but still within the GCSL permit area(s).
  - GCSL Obligations: GCSL has already addressed stormwater requirements for the GCSL landfill and Green Knight facility under NPDES Permit No. PA0074083. Requirements include site-wide implementation of NPDES Permit-listed stormwater BMPs, site-wide PPC Plan requirements (especially NPDES stormwater-related requirements), site-wide stormwater inspection/certification requirements, etc.
  - GCSL Landfill Drainage Area: The landfill disposal area has vegetated final cover and existing Sediment Trap No. 2 which minimizes any potential erosion & sedimentation and/or leachate seeps from reaching the Basin. The other GCSL landfill areas (access roads, scales, drainage area to the west of Green Knight facility, etc.). are also subject to NPDES permit requirements.
  - GKEDC Drainage Area: GCSL chose to incorporate the Green Knight Facility into its NPDES permit, and is therefore responsible for ensuring the GKEDC Facility complies with all NPDES permit requirements including: Stormwater Best Management Practices (BMPs), site-wide PPC Plan Requirements (especially the NPDES stormwater PPC plan requirements), Stormwater Inspection/certification requirements, etc.
  - Other GCSL Responsibilities: The SBHRC Facility will be located on a separate parcel leased from GCSL within the landfill permit boundary. GCSL retains all property owner liabilities and responsibilities.
- **SBHRC Obligations**: SBHRC is ultimately responsible for any pollutant being discharged to the waters of the Commonwealth via the facility's outfalls/drainage areas to the Basin, Waltz Creek and/or the Unnamed Tributary (UNT) to Little Bushkill Creek (HQ-CWF). This NPDES Permit includes additional stormwater outfalls and identified drainage areas to help determine whether the source/cause of any future pollution incident is on or off the SBHRC facility area. The Department has compliance discretion if there is clear evidence that the cause/source of a pollution event is outside the SBHRC facility area.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	006	Design Flow (MGD)	0
Latitude	40º 50' 43.71"	Longitude	-75º 15' 59.99"
Quad Name	Wind Gap	Quad Code	1243 (5.22.2)
Wastewater Description:	Stormwater associated with Industrial Activities from Drainage Area 006		
Receiving Waters	**UNT to Little Bushkill Creek**	Stream Code	-
NHD Com ID	26066422	RMI	-
Drainage Area	-	Yield (cfs/mi^2)	-
Q_{7-10} Flow (cfs)	-	Q_{7-10} Basis	-
Elevation (ft)	~708 feet	Slope (ft/ft)	-
Watershed No.	1-F	Chapter 93 Class.	HQ-CWF, MF
Existing Use	**-**	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired		
Cause(s) of Impairment	Pathogens		
Source(s) of Impairment	Source Unknown		
TMDL Status	**-**	Name	**-**

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

Nearest Downstream Public Water Supply Intake	North Penn Water Authority		
PWS Waters	-	Flow at Intake (cfs)	-
PWS RMI	-	Distance from Outfall (mi)	~44 miles -

Changes Since Last Permit Issuance: NA

Other Comments: **See above and Table 1 below. The facility is not expected to be a source of pathogens if all NPDES permit requirements are met**. The GCSL Sedimentation Basin No. 7 discharge and SBHRC Drainage Area 006 discharge are at the headwaters of this UNT.

Compliance History	
Summary of DMRs:	This is an unbuilt proposed facility. No existing DMRs.
Summary of Inspections:	This is an unbuilt proposed facility. No inspections have taken place for this facility. Area is under separate GCSL NPDES permit obligations.

Other Comments:

This facility is not being operated by Grand Central Sanitary Landfill, Inc., so the GCSL compliance history is irrelevant to this permit action.

The client (SBHRC) has no open violations per 9/13/2018 WMS Query (Open Violations for Client):

Permit: PA0276120
Client ID: 341865
Client: All

Open Violations: 0

No data was found using the criteria entered. Please revise your choices and try again

Development of Effluent Limitations

Outfall Nos.	001 - 007	**Design Flow (MGD)**	0 (stormwater)
	40º 51' 33.00" (001)		-75º 15' 43.00" (001)
	40º 51' 34.34" (002)		-75º 15' 37.92" (002)
	40º 51' 33.00" (003)		-75º 15' 44.00" (003)
	40º 51' 32.00" (004)		-75º 15' 34.00" (004)
	40º 51' 32.34" (005)		-75º 15' 41.94" (005)
	40º 51' 34.13" (006)		-75º 15' 44.93" (006)
Latitude	40º 51' 35.72" (007)	**Longitude**	-75º 15' 40.91" (007)

Wastewater Description: Stormwater associated with industrial activities

Permit Limits/Monitoring Requirements

Parameter	Limit (mg/l unless otherwise specified)	SBC	Basis
Stormwater Run-on Outfalls No. 003 and 004	**-**	**-**	**Outfalls Nos. 003 (GKEDC runoff into SBHRC stormwater drainage area) and 004 (GCSL stormwater drainage to Basin No. 2) are being monitored only. Neither Outfall receives SBHRC drainage at the point of monitoring. Monitoring will allow for distinguishing source in event of contamination from non-SBHRC sources.**
Biosolids Management Areas (SBHRC areas)	**-**	**-**	**-**
BOD5	30.0	IMAX	This is a Biosolid constituent/indicator for biosolids released in the stormwater drainage areas. The limit is based upon the general PAG-03 benchmark determination. The GCSL NPDES Permit is monitoring CBOD5 in its stormwater outfall, but BOD5 includes CBOD5.
TSS	100.0	IMAX	This is a Biosolid constituent/indicator for biosolids released in the stormwater drainage areas. The limit is based upon the general PAG-03 benchmark determination. TSS is also required due to need to define loadings due to Waltz Creek watershed impairment due to sediment/siltation.
Nitrate-N	Report	IMAX	This is a Biosolid constituent/indicator for biosolids released in the stormwater drainage areas. The GCSL NPDES Permit is monitoring Nitrate-Nitrite as N which includes this constituent.
Ammonia-N	Report	IMAX	This is a Biosolid constituent/indicator for biosolids released in the stormwater drainage areas. The GCSL NPDES stormwater monitoring includes this constituent.
Total Phosphorus	Report	IMAX	This is a Biosolid constituent/indicator for biosolids released in the stormwater drainage areas.
TDS	Report	IMAX	This is a Biosolid constituent/indicator for biosolids (salts/ions) released in the

			stormwater drainage areas. The GCSL NPDES stormwater monitoring includes this constituent. TDS is also required due to need to define loadings due to Waltz Creek watershed impairment due to sediment/siltation.
Other SBHRC Constituent	**-**	**-**	**-**
Oil & Grease	30.0	IMAX	Oil is an indicator constituent for vehicle/piping leaks. The limit is based upon the general PAG-03 benchmark determination and Chapter 95.2. It is also a standard constituent for the GKEDC SIC Code per PAG-03 Appendix H.
Additional Parameters for drainage areas receiving GKEDC Stormwater runoff (Outfall Nos. 001, 003, 005)	**-**	**-**	**GKEDC is subject to SIC Code No. 4911. These additional GKEDC parameters will pertain to drainage areas/outfalls receiving GKEDC run-off. As noted above, only monitoring is being required for Outfall No. 003 stormwater run-on.**
Total Iron	Report	IMAX	General Permit PAG-03 Statewide BPJ for this SIC Code. The GCSL NPDES Permit is monitoring dissolved Iron which is included in Total Iron.
pH	6.0 - 9.0	Inst. Min - IMAX	General Permit PAG-03 Statewide BPJ for this SIC Code. The limit is based upon the general PAG-03 benchmark determination and Chapter 95.2. The GCSL NPDES Permit is monitoring this parameter.
Additional Parameters due to GCSL stormwater contribution to stormwater drainage (Outfalls Nos. 002, 004, 005)	**-**	**-**	**The existing GCSL NPDES Permit stormwater monitoring requirements (additional to above) pertain to drainage areas/outfalls receiving GCSL run-off. As noted above, only monitoring is being required for Outfall No. 004 stormwater run-on.**
Total Arsenic	Report	IMAX	See above
Total Barium	Report	IMAX	See above
Total Cadmium	Report	IMAX	See above
Total Cyanide	Report	IMAX	See above
Total Lead	Report	IMAX	**See above. Lead is also a Waltz Creek TMDL metal being monitored site-wide.**
Total Magnesium	Report	IMAX	See above
Total Mercury	Report	IMAX	See above
Total Selenium	Report	IMAX	See above
Total Silver	Report	IMAX	See above
Total Organic Carbon	Report	IMAX	See above
Additional Waltz Creek TMDL Metals	**-**	**-**	**Monitoring is required due to Waltz Creek TMDL.**
Total Copper	Report	IMAX	See above
Total Zinc	Report	IMAX	See above
Other	**-**	**-**	**-**
Fecal Coliforms	Not needed	-	While the UNT to Little Bushkill is pathogen impaired, the facility is not expected to be a source due to industrial activities/materials handling outside of UNT watershed. Other SBRHR parameters would indicate any release in the UNT watershed.

Comments:

No available Stormwater Data:

- The facility has provided no data on incoming sewage sludge/biosolids sources and quality from a presumably wide range of customers (which themselves will have different industrial customers).
- GCSL has not been monitoring/reporting stormwater discharges to the non-discharging Basin No. 2.
- The application contained no existing site stormwater data or data from any comparable other site.
- The application contained no attempt to identify/define stormwater constituents of interest.
- The application contained no information on existing Basin No. 2 water quality.

Stormwater BMPs: The application did not identify any biosolids-specific stormwater BMPs. The normal BMPs have been incorporated plus additional liquid/non-liquid recycling facility BMP language, plus application(s)-identified structural controls (secondary containment) and for dust control (as airborne dust could negatively impact the waters of the Commonwealth (Basin No. 2). SBHRC commitments have been incorporated into the site-specific BMPs (Part C.II.E).

Co-located industrial activities: The facility's stormwater is subject to potential loading from co-located facilities (GKEDC and GCSL) in terms of both direct drainage, potential airborne dust settlement from those other industrial activities, common access roads, potential for leakage of vehicles, etc**. See Table 1 for breakdown of SBHRC stormwater drainage areas.**

- **Site-wide requirements: In addition to the above Table:**
  - **Outfalls Nos. 001 – 004 will be monitored semi-annually at minimum (except if there is no discharge from the emergency spillway to Outfall No. 002 during the DMR monitoring period).**
  - **Drainage areas Nos. 005 – 007 will be monitored upon Department request.**
  - **All other NPDES Permit requirements (Stormwater BMPs, Inspections, PPC Plan implementation, limitations on allowed non-stormwater discharges per Part C.I, etc.) apply to all outfall/drainage areas.**
- **Outfall No. 001 (receiving Outfall No. 003 flow): Receives GKEDC area run-on. Subject to additional GKEDC-related permit limits/monitoring requirements.**
- **Outfall No. 002 (Basin No. 2 emergency spillway to Waltz Creek): Will receive drainage from all three co-located facilities. Subject to additional GKEDC/GCSL-related permit limits/monitoring requirements.**
- **Outfall No. 003: GKEDC drainage directed to SBHRC Outfall No. 001 discharge (to Basin No. 2). Subject to additional GKEDC-related monitoring requirements and stormwater-related GCSL NPDES Permit requirements.**
- **Outfall No. 004: Receives GCSL run-on/drainage to Basin No. 2 (from GCSL Sediment Trap No. 2). It is subject to additional GCSL-related monitoring requirements and stormwater-related GCSL NPDES permit requirements. For purposes of this permit, BOD5 is being used instead of CBOD5; Nitrate-N instead of Nitrite-Nitrate as N, and Total Iron instead of dissolved iron.**
- **Outfall No. 005: This is a sheet flow area receiving drainage from all three co-located facilities. It will be monitored for all parameters upon Department request. Subject to additional GKEDC/GCSL-related monitoring requirements and stormwater-related GCSL NPDES Permit requirements.**
- **Outfalls Nos. 006 and 007: These SBHRC drainage areas without identified industrial activities/material handling areas will be monitored for SBHRC parameters upon Department request, plus applicable GCSL/GKEDC parameters. Subject to stormwater-related NPDES Permit requirements.**

Anti-Degradation: **No new, additional or increase loading/degradation is expected on the UNT to Little Bushkill Creek (HQ) due to this project. The non-HQ Waltz Creek watershed is not subject to Chapter 93.4 Antidegradation requirements.** Uncontaminated stormwater runoff will not increase loadings to the waters of the Commonwealth (including Sedimentation Basin No. 2 as classified as "waters of the Commonwealth"). Stormwater BMPs, stormwater outfall monitoring, and implementation of the site-wide PPC plan (with stormwater BMPs plus facility inspection requirements) will prevent contamination of the stormwater runoff.

- Antidegradation Analysis:
  - The facility has directed stormwater from the material handling areas to the non-HQ Waltz Creek watershed (including Basin No. 2 as of basin modification). The redirection of the SBHRC Sedimentation Basin No. 2's emergency spillway-only stormwater drainage to Waltz Creek also decreases any existing/potential load on the UNT to Little Bushkill Creek (from either SBHRC or GKEDC or GCSL).
  - The portions of the area along the access road frontage (draining to the UNT) do not include any material handling area which are located on the other side of the SBHRC building. The drainage will consist of roof drainage, lawn drainage, and "support" area that appear to have limited-to-no-potential for stormwater contamination.

- The Sedimentation Basin No. 2 has been classified as "waters of the Commonwealth" per the Application. It is a former quarry area that was made into a landfill stormwater control (i.e. never a HQ water by intention or later classification/designation). Originally it was never meant to discharge, but is now being regraded (losing storage/infiltration capacity) with emergency spillway relocated to direct discharge to Waltz Creek. The Basin is subject to normal protections as the waters of the Commonwealth as set forth in the NPDES Permit.
- The facility/project does not appear to involve any additional loadings from the existing GCSL Landfill/GKEDC facilities on overall stormwater loadings.

- Alternative Chapter 93.4c Alternatives:
  - Stormwater Infiltration Alternative: The regraded Sedimentation Basin is designed to not discharge at a 200-year rain event, i.e. generally operates as an infiltration basin even with loss of overall Basin capacity except during extreme weather conditions. The NPDES Permit addresses both discharge to the basin (as a water of the Commonwealth) and potential emergency discharge to Waltz Creek (non-HQ). Site spacing constraints limit any potential for additional stormwater infiltration provisions (artificial wetland, engineered stormwater infiltration ponds).
  - Relocation Alternative:
    - Given industrial activities and material handling will take place within the Waltz Creek watershed (now including the Basin drainage area), relocation would not reduce loadings on the separate HQ watershed.
    - Per separate GCSL Application: SBHRC will primarily utilize waste heat from the GKEDC turbine stacks to provide the necessary heat to the biosolids dryers, it will also have a thermal oil heater with the capability to use either natural gas or landfill gas (LFG). Greater distance from energy supplier (GKEDC LFG-to-Energy) would raise additional costs/environmental concerns in terms of additional LFG or energy transmission facilities.
  - Recycling/Reuse of Stormwater Alternative: The Department would allow the facility to use Basin water for dust control and other incidental outside usage within the facility's material handling/industrial activity areas within the Waltz Creek watershed (now including the Basin No. 2 drainage area after basin/site regrading). Other Plant usages would be subject to the requirements of proposed non-potable water usage and proper management of the resulting wastewater. Such reuse/recycling will be limited due to site-specific conditions:
    - Site spacing constraints appear to preclude space for additional stormwater collection ponds (other than Basin No. 2 itself) or storage units.
    - The facility has not identified any plant needs for the collected stormwater in terms of potential industrial usage, and would normally focus on first recycling/reusing wastewater (that alternatively must be shipped offsite for treatment/disposal).
    - Other GCSL basins already can provide the facility with reusable stormwater (without potential for additional industrial contamination in addition to standard landfill erosion & sedimentation) for dust control.
    - Any outside usage of Basin stormwater would result in flow back to Basin No. 2 and/or evaporation/infiltration with any contaminants still eventually ending up in the Basin or Basin-area groundwater. There would be little net benefit to the environment in terms of loadings.
- Facility stormwater BMPs include: Enclosed building activities, covered unloading area with secondary containment, post-construction stormwater controls, and stormwater BMPs listed in PPC Plan Section 6.3.1 (including secondary containment; use of drip pans and absorbents for leaking vehicles; installation of oil/water separators or oil & grease traps in fueling area stormdrains; etc.).
- Other Permits:
  - General: The facility is subject to other DEP permit/approvals (PADEP Air Quality; Waste Management) which must be complied with in terms of both environmental protection and prevention of nuisance. The more stringent requirements would govern in event of overlapping requirements.
  - Basin-specific Requirements: The site discharges are subject to NPDES Permit Part A.I Additional Requirements Narrative Technology-Based Effluent Limits (regarding visible changes to the waters of the Commonwealth). Therefore, both this NPDES Permit and the GCSL NPDES Permit No. PA0070483 require protection of Basin water quality, in addition to any overlapping DEP Waste Management Permit obligations.

For Release of Collected Precipitation in Process Wastewater Tank: The application requested authorization to discharge "uncontaminated" collected precipitation from the Process Wastewater Tank's secondary containment to the Basin No. 2 drainage area. The application proposed to verify lack of contamination by a visual inspection (pass/fail criteria not identified but presumed to include lack of clarity/discoloration in addition to an oil sheen that was noted to be

removable via "pads"), field pH within the range of 6.0 – 9.0 SU, and field specific conductivity of <2000 umhos "consistent with industry standard practices". **However, the application provided no documentation/source for these practices, no technical justification, no correlation of conductivity to TDS levels, and no data from any existing biosolids facility. The tank contents are substantially different from oil tanks where a visible oil sheen would be a sign of contamination and qualitative method of estimating degree of contamination. No standard operating procedure (SOP) was provided for Department review and/or approval:**

- **The site Standard Operating Procedure must be submitted and approved (in writing) by the Department for this evaluation and oil sheen removal method prior to any such discharge. The method to prevent any discharge-caused erosion & sedimentation must be specified.**
- **The Department might not authorize the discharge of collected precipitation with a field conductivity of >315 umhos.**
    - **Specific conductivity (field conductivity) is a widely used method of measuring the levels of salts and (correlated) Total Dissolved Solids (TDS) in streams. Pristine rainfall would have a very low field conductivity (being almost equivalent to distilled water except for incidentally trapped dust particles and gases). Higher field conductivity would be a measure of contaminants such as salts or metals present. In this case, airborne dust might be a significant factor.**
    - **The Waltz Creek TMDL ambient sampling data had an average of ~315 umhos at the headwaters sampling location (Station 1) on the West Branch of Waltz Creek. This is within the general range expected in streams within limestone or shale-rich areas. Therefore, the burden falls on the applicant to show that a higher field conductivity level is protective of the waters of the Commonwealth.**
- **Background Information on Specific Conductivity: To provide background information that would be considered in terms of any proposed use of specific conductivity at this facility:**
    - Per EPA Website (Water: Monitoring & Assessment; 5.9 (Conductivity)):
        - Conductivity is a measure of the ability of water to pass an electrical current. Conductivity in water is affected by the presence of inorganic dissolved solids such as chloride, nitrate, sulfate, and phosphate anions (ions that carry a negative charge) or sodium, magnesium, calcium, iron, and aluminum cations (ions that carry a positive charge). Organic compounds like oil, phenol, alcohol, and sugar do not conduct electrical current very well and therefore have a low conductivity when in water. Conductivity is also affected by temperature: the warmer the water, the higher the conductivity. For this reason, conductivity is reported as conductivity at 25 degrees Celsius (25 C).
        - Conductivity in streams and rivers is affected primarily by the geology of the area through which the water flows. Streams that run through areas with granite bedrock tend to have lower conductivity because granite is composed of more inert materials that do not ionize (dissolve into ionic components) when washed into the water. On the other hand, streams that run through areas with clay soils tend to have higher conductivity because of the presence of materials that ionize when washed into the water. Ground water inflows can have the same effects depending on the bedrock they flow through.
        - Discharges to streams can change the conductivity depending on their make-up. A failing sewage system would raise the conductivity because of the presence of chloride, phosphate, and nitrate; an oil spill would lower the conductivity.
        - The basic unit of measurement of conductivity is the mho or siemens. Conductivity is measured in micromhos per centimeter (µmhos/cm) or microsiemens per centimeter (µs/cm). Distilled water has a conductivity in the range of 0.5 to 3 µmhos/cm. The conductivity of rivers in the United States generally ranges from 50 to 1500 µmhos/cm. Studies of inland fresh waters indicate that streams supporting good mixed fisheries have a range between 150 and 500 µhos/cm. Conductivity outside this range could indicate that the water is not suitable for certain species of fish or macroinvertebrates. Industrial waters can range as high as 10,000 µmhos/cm. (Underlining added)
    - DEP Information Available Via Internet: The Pennsylvania Department of Environmental Protection, Bureau of Watershed Conservation, Watershed Support Division, Citizens' Volunteer Monitoring Program of Water Quality 1999: "Conductivity is determined "in-stream" with a conductivity meter. You could find conductivity perhaps as low as 0.5 micromhos per centimeter (umhos/cm) in distilled water or more than 10,000 micromhos per centimeter in tidal areas. **In the normal and natural conditions of Pennsylvanian waterbodies, conductivity typically ranges from about 20 - 600 micromhos per centimeter." (Bolding and underlining added)**

Table 1 (Stormwater Drainage Areas)

Drainage Area	Location	Description
001 (a.k.a. MP-A)	SW Outfall No. 001 at Proposed M Inlet to 125 LF 12-inch ADS Pipe @4.56% with riprap outlet to Basin No. 2	**Discharge to Basin No. 2/Waltz Creek Watershed. Application-estimated 429,937 square foot (~9.87 acre) drainage area (48.5% impervious) including buildings, product silos, Truck tipping/receiving units, parking lot, driveways, and equipment directed by vegetated swale to stormwater pipe to Sedimentation Basin No. 2**.
002	SW Outfall No. 002 at **Sedimentation Basin No. 2 emergency spillway** to Waltz Creek (~35.59 acre drainage area to Basin 2)	**Discharge from Basin No. 2 to Waltz Creek via emergency spillway. Application estimated total 35.59-acre drainage area for Basin No. 2. The relocated Basin No. 2 spillway would discharge to existing access road stormwater controls and culvert to Waltz Creek, assuming no overflow onto Route 512 and then into Waltz Creek (and/or redirection in Sedimentation Basin No. 7 influent culverts)**. The application indicates that the modified Sedimentation Basin No. 2 will not discharge under a 200-year storm event (i.e. discharges only under extreme weather events only).
003 (a.k.a. MP-B)	SW Outfall No. 003 at **relocated GKEDC inlet** to stormwater pipe discharging to Outfall No. 001	**Run-on from portion of GKEDC area to Outfall No. 001 (to Basin No. 2/Waltz Creek Watershed), being monitored to identify any run-on contamination. Application-estimated 5,704 square foot (~0.13 acres, 100% impervious) GKEDC drainage area (100% impervious) including buildings, parking lots, driveways, equipment area contributing flow to stormwater piping discharging to Outfall No. 001** (Upgradient to pipeline portion handling contribution to Outfall No. 001 discharge.
004 (MP-C)	SW Outfall No. 004 at **GCSL Sed Trap 2** ahead of Basin No. 2	**Run-on from GCSL landfill area to Basin No. 2/Waltz Creek Watershed, being monitored to identify any run-on contamination. Application-estimated 1,056,330 square foot (24.25 acre, ~0% impervious) GCSL drainage area (from GCSL Sediment Trap 2) with drainage area described as "final vegetated cover for GCSL Landfill, unpaved access road" (i.e. will not be disturbed by further landfill construction and stabilized to ensure minimal erosion & sedimentation).** NOTE: This point of concentrated stormwater runoff is assumed to represent GCSL discharges to Sedimentation Basin No. 2 in the absence of information pinpointing leachate seepage or visible erosion elsewhere in the overall GCSL drainage area draining to Basin No. 2. **GCSL drainage area estimated at 35.59 acres total to Sedimentation Basin No. 2**.
005	**"Outfall 005" West side of facility to represent sheet flow area draining to Sed Basin No. 2**	**Stormwater Sheet-flow Discharge to Basin No. 2/Waltz Creek watershed from SBHRC, GKEDC areas, and GCSL drainage areas. Application did not define area. Guestimated at ~6 acres. NPDES Permitting assumed a potential sampling point on Basin near Parking Lot area for a potential outfall. Includes:** • **SBHRC parking area, SBHRC Truck Maneuvering Area and SBHRC Process Wastewater Tank (including discharges of collected noncontaminated precipitation from the tank secondary containment area);** • **Majority of GKEDC gravel area (including GKEDC Heater and Appurtenances, Waste Heat Recover Units, etc.);** • Portion of GCSL drainage area.
006	North of SBHRC building (between building and access road)	**Discharge to UNT to Little Bushkill Creek Watershed (HQ)**. Estimated 30,125 square foot (0.67 acre) area. Northern Drainage Area includes SBHRC Building roof run-off and **"support area runoff"/"ancillary project operations" (cooling towers and a switch gear location shown on drawing**) in addition to roof/lawn runoff (which will sheet flow/drain into a GCSL access road ditch **and ultimately to the headwater of the UNT to Little Bushkill Creek (HQ-CWF, impaired due to pathogens) i.e. is subject to Anti-degradation considerations for new loadings**. NOTE: Support areas are generally understood to support industrial activities and will be subject to site PPC Plan requirements. Figure 2B (Existing Drainage Plan) shows the GCSL Sedimentation Basin No. 7 discharges to the ditch (with both an existing GCSL Outfall No. 7 and "Existing SW-12 monitoring Location" at the same general

		location on the ditch/swale.
007	East of Internal Drainage divide (~1.47 acres without basin discharge)	**Discharge to Waltz Creek Watershed.** Estimated 64,033 square foot (1.47 acre) area. Eastern drainage area including **SBHRC Site entrance, Driveway, sewer grinder pump, and lawn areas (plus relocated Sedimentation Basin No. 2 spillway area)** that direct flow to Waltz Creek **via existing GCSL inlets and storm sewers**. Estimated 1.47 acres drainage area (including GCSL access road) flows to Waltz Creek.
-	GKEDC site area facing access road, discharging to UNT to Little Bushkill Creek.	**Not part of this permit.** This area would include GKEDC building roof drainage, access road, and upgradient SBHRC area Drainage Area 006 discharge. Undefined acreage. This drainage area receives GCSL Outfall No. 007 (Sedimentation Basin No. 7) drainage, and **flows to the UNT**.

Communication Log: This log addresses communications known to this reviewer in regard to the IW Stormwater NPDES Permit Application (not the multiple other applications to DEP sister programs or separate communications between applicant and Township in which this reviewer was not directly copied).

3/21/2018: IW Stormwater NPDES Application received.
3/28/2018: Application Incompleteness Letter Issued.
4/9/2018: Plainfield Township Letter to DEP Clean Water Program Permits Chief (including copy of 3/20/2018 Plainfield Township Zoning & Code Office letter).
5/25/2018: May 18, 2018 Plainfield Township E-mailed comments received (copy of 5/18/2018 Plainfield Township letter to Regional Director requesting public hearing and attachments including Penn Argyl Borough comments).
6/1/2018: Pre-denial Letter issued due to incompleteness issues.
7/3/2018: Meeting with SBHRC, GSCL and ERG (Consultant) to discuss Pre-denial Letter issues and draft response e-mailed the Friday before.

- The Department issued a previous incompleteness and Predenial Letter (neither required by PDG) to provide guidance on what was needed. PDG allows denial of incomplete application. Response due circa 8/2 but they can ask for more time if needed. After the application is determined to be complete, it is scheduled for technical review. Need revised application forms. Hard copies are needed for stormwater information referenced in application from other permit applications for the public record. Flash drive copy of the other permit application okay for other information.
- The Department noted that its policy is to have to have an attorney present if one comes to a meeting. The Department generally needs to know 2 – 3 weeks in advance of a meeting if someone is bringing an attorney, to arrange for one to be present. (Even if the attorney was not there in the capacity of an attorney per the applicant). The information that an attorney was coming was only e-mailed the day before. One was available, but next time might not be.
- Drawings/Discussion:
    - Drawings must identify new drainage areas and their acreage.
    - SBHRC will use GCSL truck entrance, exit, access roads and scales under GCSL NPDES permit. SBHRC will be keeping track of all loads, not GCSL.
    - GCSL did not think there were Chapter 94 reporting requirements applying to the GCSL facility (not receiving the sludge itself). No SBHRC wastewater will go to GCSL IWTP.
    - The GCSL landfill area draining to Basin No. 2 is capped. Basin No. 2's stormwater outfall 012 was previously removed from the GCSL NPDES Permit due to no discharge. The Sedimentation Basin No. 2 will still have capacity to handle 500-year storm before discharging to emergency spillway that discharges to Waltz Creek (after proposed regrading). GCSL also had groundwater monitoring points, etc. at the landfill in terms of environmental monitoring.
    - SBHRC northern and eastern drainage areas have no material handling/industrial activity areas, and will not require stormwater outfalls if application states so. Waste-containing Trucks will not be staged in depicted parking areas.
    - Process Wastewater Tank Containment Area will have valve to let flow drain to Sedimentation Basin No. 2 (if uncontaminated stormwater). Contaminated water will go into process wastewater. Pump station can pump process wastewater to truck loading area for shipment offsite.
    - Loading/Unloading areas collect washwater which will go to Process Wastewater Tank.
    - Need additional stormwater outfall/sampling points to be able to distinguish impacts from GCSL and GKEDC from SBHRC stormwater issues. The applicant can propose them (and discuss the requirements with GCSL and GKEDC) but needed in SBHRC permit.
        - GCSL thinks that the GKEDC facility is still discharging to a non-discharging basin, and therefore did not think the GCSL NPDES permit needed to be modified. GCSL does not

want to go through a major NPDES permit modification for any new outfall. The Department noted that it is easier to add an outfall to an existing permit, but ideally all stormwater outfalls should be under the same NPDES permit. SBHRC and GCSL should discuss how to proceed.

- The NPDES permit application form will have to be updated with all required information. Monitoring will be 1/6 month per minimum PAG-03, except for basin sampling or a discharge that is not expected to discharge except under unusual circumstances (generally explained in Part A).

- Need either Sedimentation Basin No. 2 stormwater outfall sampling point at emergency outfall or annual basin sampling to identify any impacts on the Sed Basin/water resource.
- Other questions like adequacy of drawing legend can be addressed during technical review.

- Permit Coordination & Zoning:
  - Requested Public Meeting/Hearing: The Department has received requests for public hearing/meeting on the project. The Department is considering a multi-program hearing/meeting in the Fall. The DEP Clean Water Program will have to issue a Draft NPDES Permit and then have the requested event. Other DEP programs have similar or other requirements.
    - No final permit action can take place until after the future public hearing/meeting.
    - The applicant needs to identify any reason to prioritize the Department review if it needs an earlier Draft NPDES permit for review.
  - Permitting: They are confident that no permit application/zoning feedback will likely require significant site changes impacting stormwater management. Application review can proceed if the applicant is confident that other permitting program requirements and local zoning issues will not significantly impact outside stormwater controls. Otherwise, application will have to be updated as needed if changes are made.
  - Zoning Status:
    - They are confident that the zoning issues can be cleared up, and that they have the necessary approvals. They might have to update the General Information Form or otherwise explain since Plainfield Township letter indicated they did not have all required zoning. They indicated part of problem was dispute if basin was a water resource or not. Zoning issues must be addressed to allow for final permit action (and other DEP Programs have their own Zoning requirements). There will be permit coordination in terms of final permit action.
    - They raised the possibility that the host municipality might not resolve zoning issues until after permits are issued (that require zoning issues to be resolved). DEP OCC noted that this scenario has happened elsewhere, despite permitting/regulatory requirements. The Department has dealt with this type of situation before.
  - Wastewater Disposal and Receiving WWTPs: They will generate about 90,000 GPD wastewater, and plan to either send it back to biosolids generation facility or WWTP able to dispose of it. The site wastewater will be mixed with other sources. The Department noted that they might want to discuss the option further with the Department. The permittee might want to discuss a general process and wastewater characterization to allow the smaller plants to accept the wastewater easier and quicker (with larger facilities often having the process already set up to handle indirect dischargers, etc. The receiving WWTP standard NPDES requirements include:
    - NPDES Part A.III.C.1 (Planned changes to physical facilities) if they have to modify their plant to accept hauled-in wastes.
    - NPDES Part A.III.C.2 (Planned changes to Waste Stream) requirements for new waste streams.
    - NPDES Part A.III.C.3 (Hauled-in Residual Waste) requirements that would apply (site wastewater is not sewage sludge or septage).

        - NPDES Part B General Pretreatment requirements with "indirect discharger" concerns including pass-through, interference, etc. Some WWTPs might be limited in what they can take due to effluent issues or already-impacted receiving stream.
    - Process Wastewater Tank Containment Area precipitation: If they have any BMPs or other regulatory basis or technical rationale for proposed sampling requirements (to demonstrate no contamination), it should be provided in the revised application. This wastewater might be contaminated with no visible oil sheen, so it is unclear whether a visual check and proposed turbidity range would demonstrate no contamination.
    - Biosolids Processing GP permitting: They need to make sure that any new Biosolids Processing GP (being developed separately by Central Office) addresses beneficial use or otherwise apply for whatever additional permitting is needed.
        - The site product will not be coverable under any GCSL PAG-07 coverage. They might need their own.
        - If the facility receives Residual Wastes (some RSW might be suitable for site use for making the product), the PAG-07 might not apply to the site product.
    - Mining Letter: Need application to include letter and proof of notification to DEP Mining Program for the record.
    - Planning: They will send in "postcard" notification of sanitary sewage flow to PAMA in the future. The Department noted that Rob Stermer is the current head of DEP Planning if they have any planning questions.
- Stormwater BMPs:
    - If there is any industry or national stormwater BMPs for the biosolids processing industry, provide them. This would help the Department develop the NPDES permit for this new type of facility.
    - The permittee has to be comfortable that they are complying with all NPDES permit BMPs. The Department provided NPDES IW Stormwater Permit BMPs (general) and landfill, steam electric station, and liquid recycling template BMPs so that they could see what might end up in the Draft NPDES Permit. They should look them over and make sure they can meet them. If not, then they can propose modifications to an Individual IW NPDES permit's BMPs.

7/18/2018: Delaware Riverkeepers Network's E-mailed comments received. (Hard copy indicated to have been mailed).

8/1/2018: Revised Application received and determined to be complete.

8/8/2018: Call from Plainfield Township Manager regarding Sedimentation Basin No. 2's classification as a stormwater control or water of the Commonwealth. He said the Township wanted to "appeal a decision".

- Told him the classification would not be made by the DEP Clean Water Program, but likely the DEP Wetlands & Waterways Program (Chapter 105). He knew Kevin White as a contact.
    - Told him I was unsure if there was an application in front of the sister program. However, he can contact them. The Township would have to provide information on the basin to allow any Department program to make any decision on the classification of the basin.
    - Told him DEP Waste Management was another contact as they would be reviewing any plan to modify that basin under the GCSL permit. They often work with the sister program in their landfill projects. In addition, he could contact the DEP Mining Program (Pottsville) as they were previously involved with the basin.
    - Told him the basin classification would not make much difference to the Individual IW Stormwater NPDES Permit (which can authorize non-contaminated stormwater discharges to either stormwater infiltration basins or flowing streams), unless it impacted stormwater management onsite.
    - Told Kevin White about the phone-call that day. Kevin indicated no formal written decision had been made (as of 8/8/2018) but he was going to write up a letter based on information previously provided by ERG (SBHRC consultant). The letter was going to have standard language that new

information or public comment could result in change in classification decision. He had heard from the Township consultant that they might provide comment/information, but had not seen anything yet.

- Told him the Individual IW Stormwater NPDES permit was considered complete, but permit action (including issuing draft NPDES permits for public comments) would be coordinated with other programs and the previously requested public hearing/meeting (tentatively to be scheduled in the Fall per my understanding).

8/15/2018: Plainfield Township Letter regarding Sedimentation Basin No. 2 received. Letter scanned and forwarded to DEP Waste Management and DEP Waterways & Wetlands Program on 8/17/2018.
9/4/2018: Partial E-mail copy of 8/31/2018 ERG Letter to Plainfield Township responding to Delaware Riverkeeper Comments (e-mail omitted attachments and referenced correspondence). Included written clarifications on stormwater BMPs being incorporated into NPDES Part C BMP conditions:

- Truck tailgates will be washed in the designated area adjacent to the dryer building. Storm and tailgate wash water in the truck unloading/loading areas will be contained in concrete structures, drained to the collection sump, and conveyed to the wastewater storage tank for offsite disposal.
- SBHRC will cease receiving incoming biosolids if its onsite wastewater storage tank is at capacity.

Summarization of Applicable Public Comments Received for Individual IW Stormwater NPDES Permit as of August 15, 2018

- Request for Public Meeting/Hearing: A combined multi-program Public Hearing/Meeting has been scheduled for November 7, 2018. This Draft NPDES Permit has been issued to allow for informed public comment on the Draft Individual IW Stormwater NPDES Permit and Permit Application. All written public comments will be addressed in the final permitting decision and Public Meeting/Hearing Comment-Response Document.
- Project does not meet local zoning ordinances and has not received zoning approval/permits/variances:
    - The NPDES Permit does not supersede any local zoning or ordinance requirements.
    - The applicant has assured the Department that no changes to site stormwater management will be needed to address zoning or local ordinances.
        - Unless the zoning/ordinances require significant changes to proposed stormwater management onsite, the requirements are largely irrelevant to the NPDES Stormwater Permitting.
        - Future site changes would be subject to NPDES Permit Part A.III.C.2 notification requirements. The Department would determine if additional permitting is required at that time.
    - The other DEP Programs will be evaluating whether any zoning/ordinance requirements impacts their permit/approval process. Permit Coordination will ensure application/permitting consistency.
- Receiving Basin is a Water of the Commonwealth and must be Protected:
    - The Application concurred with Basin classification as a water of the Commonwealth (i.e. classification is not being disputed). The Basin is subject to all applicable regulatory and permit protections as a water of the Commonwealth.
    - The Basin would discharge to Waltz Creek (Cold Water Fishery) and is considered part of the Waltz Creek watershed, and is being given the same level of protection.
    - The Individual IW Stormwater NPDES Permit(s) addresses the discharge of uncontaminated stormwater (from industrial activities/material handling areas) to the waters of the Commonwealth.
        - The NPDES Permit does not authorize the discharge of any wastewater or treated wastewater to the waters of the Commonwealth.
        - The drainage areas are subject to NPDES Permit requirements for stormwater Best Management Practices; PPC Plan requirements to address any onsite spill, leak or other release that might impact the Basin; stormwater inspection requirements, and stormwater monitoring/permit limits to verify that the stormwater is being protected from potential contamination sources. At this point in time, the contributing landfill disposal area acreage is capped and revegetated, with minimized potential for erosion and sedimentation to impact the Basin.
        - This Draft NPDES permit includes Part A.I Additional Requirements Items 1 through 4 (narrative Technology-Based Effluent Limits) that apply to the Basin.
    - The DEP Waste Management Program permit review will address construction-related earth disturbance and construction stormwater management to protect the waters of the Commonwealth.
    - Plainfield Township formally requested the Department to "require a permit for the proposed activities" (including pond fill/regrading), and stated the Township position is "that a detailed review of all proposed activities at the site, including a hydrogeological evaluation, must be conducted to ensure that there not be "a significant effect upon the safety or the protection of life, health, property or the environment," as provided in Chapter 105.12(a)". Chapter 105.12(a)

states: " If the Department upon complaint or investigation finds that a structure or activity which is eligible for a waiver, has a significant effect upon safety or the protection of life, health, property or the environment, the Department may require the owner of the structure to apply for and obtain a permit under this chapter."

- The Township public comment was forwarded to the DEP Waste Management Program as the permitting authority for the proposed Basin modification (under the GCSL Landfill Minor Permit Modification application). The DEP Waste Management permitting process includes consultation with the DEP Waterways & Wetland Program (includes the Chapter 105 Permitting Program) regarding any Chapter 105 permitting requirements.

- Impact on a High Quality Watershed:
  - The facility's industrial activity/material handling areas will not discharge stormwater to the "Unnamed Tributary to Little Bushkill Creek" (HQ-CWF).
    - Basin Discharge to Waltz Creek: The Basin's emergency spillway will discharge to Waltz Creek (CWF), which is not a HQ water.
      - Due to basin conditions, the only discharges expected will take place under peak wet weather conditions (>200 year storm events).
      - A previously approved (unbuilt) Basin discharge barrel discharge to the UNT watershed will no longer be authorized after this permit is issued.
    - SBHRC Discharge to UNT: The only identifiable SBHRC drainage area to the HQ stream is the small drainage area between the SBHRC building and landfill access road, with drainage directed to GCSL drainage areas already under the separate GCSL NPDES Permit No. PA0070483. Stormwater permit conditions include standard non-stormwater discharge protections to prevent non-stormwater impacts.
  - Existing Site Conditions: The proposed Biosolids facility is located within an existing MSW landfill site with existing waste-containing truck traffic and authorized to accept municipal and residual waste sludges (including biosolids) under the existing DEP Waste Management Program MSW Landfill Permit provisions (and previous Form D Environmental Assessments taking truck traffic and other impacts into account). GCSL and GKEDC are existing facilities covered under the separate NPDES Permit No. PA0070483. To the extent that the existing facilities were already approved for truck traffic and stormwater discharges, there is no apparent increased loadings associated with this project.
  - Related: See Fact Sheet Effluent Limitations Section/Antidegradation Analysis for further information.
- Concern about Impact on Downstream Conditions: Non-contaminated stormwater is not expected to impact any downstream conditions in either the UNT to Little Bushkill Creek or Waltz Creek. Basin No. 2 would also only discharge during >200-year stormwater events to Waltz Creek per the application.
- Potential Impact on Site Groundwater Conditions:
  - This Individual IW Stormwater NPDES Permit will only allow for discharge of uncontaminated stormwater to the waters of the Commonwealth. Uncontaminated stormwater is not expected to negatively impact groundwater conditions.
  - The SBHRC facility and existing Basin are located in a former Mining Quarry area with the Basin being a former quarry that was converted to use as a sedimentation/stormwater control for the immediately adjacent landfill disposal area (which has a groundwater monitoring system under the MSW Landfill Permit). The existing groundwater conditions are outside the scope of this permit, and would have been previously addressed by the DEP Waste Management Program permitting.
- Delaware River Keepers Argument that the overall project/assorted Permit Applications might lead to degradation of the environment: Each DEP Program has a permitting process that identifies and addresses potential impacts on the environment, including impacts on wetlands, etc. Permit Coordination will ensure that environmental impacts are addressed for the overall project, with only

uncontaminated stormwater being authorized for discharge under this Individual IW Stormwater NDPES Permit.

- Nuisance Concerns (concerns of nuisances from vehicle traffic, odors, noise, dust, vectors, etc.), pollution, and impact on local quality of life including public health & safety plus property values):
  - Potential Nuisance:
    - General:
      - To the extent the proposed facility operations will be taking place at a MSW Landfill (authorized to accept biosolids for disposal), there will be no expected facility impacts not already addressed by the previous DEP Waste Management Program's Form D (Environmental Assessment) review for Grand Central Sanitary Landfill. GCSL retains all existing responsibilities as the MSW Landfill permittee and landowner.
      - Potential nuisance issues will be addressed by other DEP Programs (Air Quality Program; Waste Management Program) during permit coordination as this application is limited to IW Stormwater management. For example, the DEP Waste Management Program biosolids general permit and regulations (Chapters 271, 283, 285 and 299) will address potential nuisance from the incoming waste materials, waste processing activities, and site product. Air Quality will be addressing facility emissions to the atmosphere..
      - Nothing in the IW Stormwater NPDES Permit will supersede local zoning/ordinance requirements for nuisance control.
    - Stormwater-Related Nuisances: The IW Stormwater NPDES Permit standard conditions (including structural and nonstructural Stormwater BMPs, PPC Plan requirements, and stormwater monitoring/limits) will act to prevent and/or minimize nuisance and nuisance potential onsite plus any degradation of the waters of the Commonwealth (including groundwater).
      - The IW Stormwater NPDES Permit has minimum requirements, and will not supersede and/or limit the requirements of the other DEP permits for the site.
      - Post-construction stormwater controls will be incorporated by reference into the stormwater BMPs by reference.
      - Any nuisances and/or spills/leaks/releases on the surrounding GCSL MSW Landfill permit area (co-used entrance, scales, access roads with stormwater controls, truck wash, etc.) will be addressed separately under the MSW Landfill permit and GCSL NPDES Permit. The landfill screens incoming loads for radioactivity as well.
      - In event of overlapping permit/approval requirements, the more stringent requirement governs (whether MSW Landfill Permit, General Permit, and/or DEP Air Quality).
    - Traffic-specific Concerns:
      - The DEP Waste Management Program has overall authority in regard to truck traffic using the MSW Landfill's permitted access roads and scales, and previously reviewed overall traffic routes via its Form D Environmental Assessment process for the landfill. Lower Mount Bethel Township complaint/comment regarding landfill or SBHRC or GKEDC truck traffic impacting local roads (as a short cut to I-80) should be directed to the DEP Waste Management Program.
      - The SBHRC facility has committed to not having any overnight storage of waste-containing or product-containing trucks at the SBHRC site.
  - Pollution:

- General Pollution Issues: Potential pollution issues will be addressed by other DEP Programs (Air Quality Program for air pollution; Waste Management Program for onsite processing/storage/transportation of waste materials and/or materials to be beneficially used under the proposed new Biosolids General Permit) during permit coordination. In event of overlapping permit/approval requirements, the more stringent requirement governs (whether NPDES Permit(s), MSW Landfill Permit, General Permit, and/or DEP Air Quality).
- Site Stormwater: The IW Stormwater NPDES Permit only addresses potential contamination of uncontaminated stormwater being discharged from the site. The Permit will address potential pollution from the material handling and industrial activities by stormwater BMPs, stormwater monitoring/permit limits, and PPC Plan requirements in terms of dust and/or material releases. These BMPs represent minimum requirements, and do not supersede or limit the requirements of the other DEP permits for the site.
- Site Process Wastewater: This facility is not a Wastewater Treatment Plant (WWTP) and will have zero permitted wastewater discharges.
    - The IW Stormwater NPDES Permit does not authorize any discharge of wastewater onsite (only uncontaminated stormwater as ensured by permit conditions and monitoring/limits).
    - The facility plans to ship all process wastewater offsite for disposal in accordance with the applicable requirements (transportation regulations; receiving facility permit/regulatory requirements).
- Site-generated Sanitary Wastewater (restroom, showers, etc.): Will be directed to Penn Aryl Municipal Authority (PAMA) sewage collection system and WWTP for disposal only.
- Distribution and beneficial use of site product in land application: The facility has not yet applied for PAG-07 Biosolids coverage. The facility will either have to apply for coverage prior to land application or address PAG-07 requirements in the proposed Biosolids General Permit. Either option will require the facility to properly manage all materials and prevent nuisance/releases to the environment.

- Potential Fire Risks & Dust Explosion Potential:
    - General:
        - The Waste Management Permits (including proposed new biosolids general permit) will separately address potential fire contingencies and dust explosion contingencies from the processed biosolids product (including fuel product).
        - Nothing in the IW Stormwater NPDES Permit will supersede local zoning/ordinance requirements.
        - The Draft NPDES Permit includes Special Conditions requiring the site PPC Plan to more adequately address fire contingency planning (including use of Basin No. 2 water for fire-fighting). Basin water can also be used for other purposes such as wetting combustible site product as a fire prevention method.
    - IW Stormwater NPDES Permit: IW Stormwater BMPs will otherwise limit dust potential (as dust can impact the site stormwater). Semi-annual monitoring would identify dust impacts on the stormwater discharge, with permit limits and standard conditions to require action as needed.
    - Nothing in the permit will supersede other local, state, or Federal requirements, including OSHA.