

**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT**

FORM NO. 13-A

**MODIFICATION TO SOLID WASTE DISPOSAL AND/OR PROCESSING PERMIT**

Under the provisions of Act 97, the Pennsylvania Solid Waste Management Act, the Act of July 7, 1980, P.L. 380, 35 P.S. §§ 6018.101, et seq., Solid Waste Permit Number 300491 issued on March 4, 2013 to Homer City Generation, LP, 1750 Power Plant Road, Homer City, PA 15748 for operation of the Homer City Station Ash Disposal Site Landfill located in Center and Blacklick Townships, Indiana County is hereby modified as follows:

1. This permit modifies Solid Waste Permit No. 300491 originally issued on March 26, 1997. It is issued in response to Solid Waste Management Application No. 300491 dated November 6, 2015 and designated as Authorization Request No. 1193056 for expansion of the Homer City Ash Disposal Site. The plans and specifications in the application, including subsequent revisions and addendum(s) submitted to the initial application, are approved by the Department and are enforceable as a part of this permit renewal.

This permit modification is issued based on the assumption that the information submitted in Solid Waste Management Permit Applications No. 300491, designated as Authorization Request No. 1193056, referenced in Permit Condition No. 2 are accurate. Any inaccuracies found in this information may be grounds for the revocation or modification of this permit and potential enforcement action.

2. This approved application consists of the following documents:

Form No./Letter	Form Title	Date (Revision)
Form GIF	Permit Application - General Information	11/6/15
Form A	Application For Municipal or Residual Waste Permit	11/6/15 (11/25/19)
Form B	Professional Certification	11/6/15 (11/25/19)
Form B1	Application Form Certification	11/6/15 (11/25/19)
Form HWC	Compliance History Certification	11/6/15
Form D	Environmental Assessment Process for Municipal and Residual Waste Management Facilities	11/6/15 (7/27/17)
Form E	Contractual Consent of Landowner	11/6/15
Form F	Soils Information - Phase I	11/6/15
Form G(A)	Air Resources Protection - Dust Emission Estimate and Control Plan	11/6/15 (11/23/18)
Form H	Revegetation	11/6/15
Form I	Soil Erosion and Sedimentation Controls	11/6/15 (11/23/18)
Form J	Soils Information - Phase II	11/6/15
Form L	Contingency Plan for Emergency Conditions	11/6/15
Form Q(1)	Request for Equivalency Review – Subbase Sloes > 33%	11/6/15 (11/23/18)
Form Q(2A)	Request for Equivalency Review – Subbase Permeability in Overly Areas	11/23/18
Form Q(2B)	Request for Equivalency Review – GCL with Sand/Aggregate Subbase	11/23/18

This modification shall be attached to the existing Solid Waste Permit described above and shall become a part thereof effective on **January 8, 2020**.

*Sharon Bittel*

FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT**

Permit No. 300491

<u>Form No./Letter</u>	<u>Form Title</u>	<u>Date (Revision)</u>
Form Q(3)	Request for Equivalency Review – Geocomposite Leachate Detection Zone	11/6/15 (11/25/19)
Form Q(4)	Request for Equivalency Review – Landfill Protective Cover/Leachate Collection System	11/6/15 (11/23/18)
Form Q(8)	Request for Equivalency Review – Leachate Detection Geocomposite Drainage Lines	11/6/15 (11/25/19)
Form Q(9)	Request for Equivalency Review – Final Cover Bench	11/6/15
Form Q(10)	Request for Equivalency Review – 12-inch Protective Cover	11/6/15
Form Q(11)	Request for Equivalency Review – GCL with Soil Subbase	11/6/15
Form 1R	Facility Plan	11/6/15 (11/23/18)
Form 2R	Map Requirements – Phase I	11/6/15
Form 3R	Map Requirements – Phase II	11/6/15
Form 6R	Geologic Information	11/6/15 (4/14/16)
Form 7R	Hydrogeologic Information	11/6/15 (1/30/17)
Form 8R	Residual Waste Landfills and Disposal Impoundments Baseline Ground Water Analyses	11/6/15 (12/27/17)
Form 10R	Mineral Deposits Information – Phase II	11/6/15 (4/14/16)
Form 11R	Alternative Water Supply – Phase I	11/6/15 (7/27/17)
Form 12R	Operation Plan – Phase II	11/6/15 (11/25/19)
Form 13R	Water Quality Monitoring System – Phase II	11/6/15 (11/25/19)
Form 16R	Liner System - Phase II	11/6/15 (12/20/19)
Form 17R	Leachate Management- Phase II	11/6/15 (11/25/19)
Form 18R	Closure/Postclosure Land Use	11/6/15 (11/25/19)
Form 23R	Control Plans Bonding Worksheets	11/6/15 11/6/15 (11/25/19)
Correspondence	Environmental Assessment Review Letter Response	4/14/16
Correspondence	Phase 1 Review Letter Response	1/30/17
Correspondence	Phase 1 Second Review Letter Response	7/27/17
Correspondence	Phase 1 Second Review Response Additional Information	12/27/17
Correspondence	Phase 2 Technical Review Letter Response	11/23/18
Correspondence	Supplemental Phase 2 Technical Review Letter Response	6/4/19
Correspondence	Phase 2 Second Technical Review Letter Response	11/25/19
Correspondence	Draft Permit Comment Letter	12/20/19

<u>Drawing No.</u>	<u>Title</u>	<u>Date (Revision)</u>
D-728-1115	Surface and Subsurface Property Ownership (Sheet 1 of 2)	11/6/15
D-728-1116	Surface and Subsurface Property Ownership (Sheet 2 of 2)	11/6/15
D-728-1117	Quarter Mile and Half Mile Offset Map (Sheet 1 of 4)	11/6/15
D-728-1118	Quarter Mile and Half Mile Offset Map (Sheet 2 of 4)	11/6/15
D-728-1119	Quarter Mile and Half Mile Offset Map (Sheet 3 of 4)	11/6/15
D-728-1120	Quarter Mile and Half Mile Offset Map (Sheet 4 of 4)	11/6/15
D-728-1121	Base Geology Map	11/6/15 (4/14/16)
D-728-1157	Structure Contour Map	4/14/16
D-728-1122	Bedrock Surface Contour Map	11/6/15

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT

Permit No. 300491

Drawing No.	Title	Date (Revision)
D-728-1123	Seasonal High Groundwater Contour Map	11/6/15
D-728-1124	Proposed Water Quality Monitoring Network (Sheet 1 of 3)	11/6/15 (11/25/19)
D-728-1125	Proposed Water Quality Monitoring Network (Sheet 2 of 3)	11/6/15 (11/25/19)
D-728-1158	Proposed Water Quality Monitoring Network (Sheet 3 of 3)	11/6/15 (7/27/17)
D-728-1126	Geologic Cross-Sections	11/6/15 (1/30/17)
D-728-1127	Soils Map	11/6/15
D-728-1128	Subgrade Grading Plan	11/6/15 (11/23/18)
D-728-1129	Protective Cover Grading Plan	11/6/15 (11/23/18)
D-728-1130	Final Cover Grading Plan	11/6/15 (11/23/18)
D-728-1131	Erosion Sediment, and Stormwater Control Plan	11/6/15 (11/25/19)
D-728-1132	Landfill Development Plan Stage IV Phase 1 (Sheet 1 of 8)	11/6/15 (11/23/18)
D-728-1133	Landfill Development Plan Stage IV Phase 2 (Sheet 2 of 8)	11/6/15 (11/23/18)
D-728-1134	Landfill Development Plan Stage V Phase 1 (Sheet 3 of 8)	11/6/15 (11/23/18)
D-728-1135	Landfill Development Plan Stage V Phase 2 (Sheet 4 of 8)	11/6/15 (11/23/18)
D-728-1136	Landfill Development Plan Stage V Phase 3 (Sheet 5 of 8)	11/6/15 (11/23/18)
D-728-1137	Landfill Development Plan Stage V Phase 4 (Sheet 6 of 8)	11/6/15 (11/23/18)
D-728-1138	Landfill Development Plan Stage V Phase 5 (Sheet 7 of 8)	11/6/15 (11/23/18)
D-728-1139	Landfill Development Plan Stage V Phase 6 (Sheet 8 of 8)	11/6/15 (11/23/18)
D-728-1140	Engineering Cross-Sections (Sections A-A and B-B)	11/6/15 (7/27/17)
D-728-1141	Engineering Cross-Sections (Sections C-C, D-D and E-E)	11/6/15 (7/27/17)
D-728-1142	Liner System Details (Sheet 1 of 2)	11/6/15
D-728-1143	Liner System Details (Sheet 2 of 2)	11/6/15 (11/23/18)
D-728-1144	Final Cover System Details (Sheet 1 of 2)	11/6/15 (11/23/18)
D-728-1145	Final Cover System Details (Sheet 2 of 2)	11/6/15 (11/23/18)
D-728-1146	Leachate Transmission Plan	11/6/15 (11/23/18)
D-728-1147	Leachate Management System Details (Sheet 1 of 5)	11/6/15 (11/23/18)
D-728-1148	Leachate Management System Details (Sheet 2 of 5)	11/6/15 (11/23/18)
D-728-1149	Leachate Management System Details (Sheet 3 of 5)	11/6/15
D-728-1150	Leachate Management System Details (Sheet 4 of 5)	11/6/15 (11/23/18)
D-728-1151	Leachate Management System Details (Sheet 5 of 5)	11/6/15 (11/23/18)
D-728-1152	Erosion Sediment, and Stormwater Control Details (Sheet 1 of 4)	11/6/15 (11/23/18)
D-728-1153	Erosion Sediment, and Stormwater Control Details (Sheet 2 of 4)	11/6/15 (11/23/18)
D-728-1154	Erosion Sediment, and Stormwater Control Details (Sheet 3 of 4)	11/6/15 (11/23/18)
D-728-1155	Erosion Sediment, and Stormwater Control Details (Sheet 4 of 4)	11/6/15 (11/23/18)
D-728-1156	Earthworks Detail	11/6/15

3. This permit modification is issued in accordance with 25 Pa. Code Chapters 287 and 288 for solid waste disposal operations within the 419.6-acre permit area depicted on Drawing Nos. D-728-1115 and D-728-1116 dated November 6, 2015 and described as the Surface and Subsurface Property Ownership Map. This permit authorizes the disposal of residual solid waste generated at the Homer City Generating Station on the 115.6-acre Stage IV and Stage V Expansion Areas within the 247.9-acre disposal area at the permitted facility. Management of hazardous waste as defined by 25 Pa. Code Section 261a is prohibited at this site.

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT

Permit No. 300491

---

4. This permit modification is issued based on the assumption that the benefits to the Commonwealth of Pennsylvania deriving from the expansion of the Homer City Ash Disposal Site clearly outweigh the harms related thereto. On an annual basis, the permittee shall prepare a detailed status report analyzing the specific harm mitigation activities conducted and corresponding benefits of the facility's operation in terms of the assertions made in this regard in the "Harms and Benefits Analysis" dated November 6, 2015, and all revisions and addendums thereto, as approved by the Department on February 14, 2018. That report shall be included with each year's Annual Operation Report submitted in accordance with Permit Condition No. 36 below.

Failure of the facility's operation to perform in a manner assuring that the benefits exceed the harms may be grounds for the revocation or modification of this permit.

5. Unless amended by this permit modification or a previously approved permit modification, all design and operational requirements set forth in Solid Waste Permit No. 300491, issued on March 26, 1997 remain valid for this permit modification.
6. This permit expires on January 8, 2030. The disposal operations authorized by this permit modification may be conducted until the final grades shown on Drawing No. D-728-1130 dated November 6, 2015, as revised on November 23, 2018, and described as the Final Cover Grading Plan are achieved or the permit expires, whichever is earlier.
7. This permit modification requires implementation of the Air Quality Mitigation measures described in Section 3.17.2 of Harms and Benefits Analysis of the approved application. Pursuant to that plan, the permittee shall comply with the fugitive emission standards adopted under the Chapter 123 (Standards for Contaminants) regulations issued under the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, 35 P.S. Section 4005 and shall be required to comply with all the applicable sections of the Fugitive Emissions Sections 123.1 and 123.2.
- A. All roadways must be maintained to minimize fugitive particulate emissions. Paved roadways must be flushed with a pressurized water truck or similar vehicle. If this method of control is deemed to be inadequate, the Department reserves the right to require the use of a vacuum type road sweeper to further control fugitive emissions. Paved roadways must be maintained so that dust control measures can be effectively applied or operated. Unpaved roadways must be treated on an as needed basis using dust suppressants and/or water to minimize fugitive dust generation.
- B. For paved roadways, the following records must be maintained on site and available for Department inspection:
- i. Daily log of time and location of any water flushing or vacuum sweeping conducted.
  - ii. Identification, time, and location of any maintenance repairs, patching, or repaving of roads:
  - iii. A log explaining why any water flushing or vacuum sweeping was not performed.
- C. For unpaved roadways, the following records must be maintained on-site and available for Department inspection:

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT

Permit No. 300491

---

- i. A daily log of time and location of treated areas.
  - ii. An identification of dust suppressants used.
  - iii. A log of dilution ratios of dust suppressants and diluent used if chemical suppressants are used.
  - iv. A purchase record of all dust suppressants used.
- D. A pressurized water truck or similar vehicle must be available on site to minimize the generation of fugitive dust during landfill construction and operation.
- E. Vehicle traffic operating within the facility shall be restricted to a 15 mph speed limit on facility roadways. This limit shall be clearly posted and easily legible along all access routes and be strictly enforced by landfill personnel.
- F. Nothing contained herein shall relieve the applicant's obligation to comply with any provisions of the Pennsylvania Clean Air Act or the Department's Air Quality Regulations. These include but are not limited to fugitive emission regulations contained in 25 Pa. Code Sections 123.1-2, the Department's odor regulations contained in 25 Pa. Code Section 123.31, and the ambient air quality standards specified in 25 Pa. Code Chapter 131.
8. This permit requires that the Soil Revegetation Plan be implemented as described in Form H of the approved application, subject to the condition that all cover soil placement and seeding shall be completed each year so as to assure the establishment of successful vegetation and that the potential for erosion is minimized.
9. This permit modification requires that the Soil Erosion and Sedimentation Control Plan be implemented as described in Form I of the approved application. This authorization is subject to the following conditions:
- A. The permittee shall construct, implement and maintain the erosion and sedimentation control structures in accordance with the approved plan prior to any earth disturbance activities in the areas tributary to those structures.
  - B. The permittee shall maintain all erosion and sedimentation control channels to ensure that the required design dimensions and protective linings are available at all times. Damaged channel linings shall be repaired or replaced as soon as practicable. When observed, accumulations of sediment or debris shall be removed as soon as practicable.
  - C. Sedimentation basins shall be inspected on a weekly basis and after each runoff event. Accumulated sediments shall be removed and the structure restored to its design dimensions as soon as practicable upon observation that the sediment has reached the clean-out elevation designated in the approved design.
10. This permit requires that the Contingency Plan for Emergency Conditions be implemented as described in DEP Form L of the approved application, subject to the following conditions:
- A. The provisions of the approved plan shall be carried out whenever emergency situations arise which endanger public health and safety, or the environment.

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT

Permit No. 300491

---

- B. A copy of the approved plan and any subsequent revisions shall be maintained on-site. All members of the facility's organization responsible for developing, implementing, and maintaining the plan, and all designated emergency coordinators, shall review the plan and be thoroughly familiar with its provisions.
- C. Additional copies of the approved plan shall be distributed to the county and local emergency management agencies, local fire departments and/or Hazmat Teams, local emergency medical services, and local police departments to the extent to which they may become involved in an actual emergency.
- D. The Contingency Plan for Emergency Conditions shall be periodically reviewed and, if necessary, updated. At a minimum, revisions must occur when:
- i. Applicable Department regulations are revised;
  - ii. The plan fails in an emergency;
  - iii. The facility changes in its design, construction, operation, maintenance, or other circumstances, in a manner that materially increases the potential for fires, explosions or releases of toxic or hazardous constituents; or which changes the response necessary in an emergency;
  - iv. The list of emergency coordinators changes;
  - v. The list of emergency equipment changes; or
  - vi. As otherwise required by the Department.
11. This permit approves, pursuant to 25 Pa. Code Section 287.231, a request for equivalency review with respect to 25 Pa. Code Section 288.433(b)(2) providing for construction of the liner system in those portions of the Stage IV and Stage V disposal areas that overlie the existing waste disposal area with 40% (2.5H:1V) slopes as described in Form Q(1) of the approved application.
12. This permit approves, pursuant to 25 Pa. Code Section 287.231, a request for equivalency review with respect to 25 Pa. Code Section 288.433(b)(1) providing for waiver of the permeability requirement applicable to soil subbase in the overlay portions of the Stage IV and Stage V disposal areas due to use of geosynthetic clay liner as the lower component of the composite secondary liner on the prepared surface of in-place coal combustion residue subgrade material as described in Form Q(2A) of the approved application.
13. This permit approves, pursuant to 25 Pa. Code Section 287.231, a request for equivalency review with respect to 25 Pa. Code Section 288.433(b)(1) providing for use of subbase in the Stage IV and Stage V disposal areas that is composed of a six-inch layer of Type A or Type B (1, 2 or 3) sand as specified in PaDOT 408 Section 703.1, AASHTO #10 aggregate or in-place fly ash in overlay areas that is more permeable than  $1 \times 10^{-2}$  cm/sec providing that geosynthetic clay liner is placed between the secondary liner geomembrane and prepared subgrade material as described in Form Q(2B) of the approved application.

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT

Permit No. 300491

- 
14. This permit approves, pursuant to 25 Pa. Code Section 287.231, a request for equivalency review with respect to 25 Pa. Code Section 288.435(b) providing for the use of synthetic drainage materials for the leachate detection zone in the liner system to be constructed in the Stage IV and Stage V disposal areas as described in Form Q(3) of the approved application. The geocomposite drainage material shall possess a minimum transmissivity of  $1.0 \times 10^{-3}$  m<sup>2</sup>/sec at a loading of 15,000 pounds per square foot and 33% gradient and be manufactured with a 270-mil thick HDPE geonet core bonded on both sides with nonwoven geotextile with a nominal unit weight not less than 10 ounces per square yard.
15. This permit approves, pursuant to 25 Pa. Code Section 287.231, a request for equivalency review with respect to 25 Pa. Code Sections 288.437(b) and 288.438(b) providing for use of coal combustion byproducts for the protective cover/leachate collection system of the liner system to be constructed in the Stage IV and Stage V disposal areas as described in Form Q(4) of the approved application as follows:
- A. In areas with base grades less than or equal to 15%, the approved protective cover/leachate collection system consists of a 12-inch lower layer composed of AASHTO #8 aggregate possessing a minimum permeability of  $1.0 \times 10^{-1}$  cm/sec, a 6-inch layer of bottom ash or sand possessing minimum permeability of  $1 \times 10^{-2}$  cm/sec and a 2.5-foot layer of fly ash.
  - B. In areas with base grades greater than 15%, and areas that overlay previously disposed waste, the approved protective cover/leachate collection system consists of an 18-inch bottom ash or sand possessing minimum permeability of  $1 \times 10^{-2}$  cm/sec and a 2.5-foot layer of fly ash.
16. This permit approves, pursuant to 25 Pa. Code Section 287.231, a request for equivalency review with respect to 25 Pa. Code Section 288.435(b)(1), (4) and (5) providing for use of geocomposite drainage lines in lieu of pipes at locations within the leachate detection system on 3% base grades in the Stage IV and Stage V disposal areas designated on Drawing No. D-728-1129 as described in Form Q(8) of the approved application. The geocomposite drainage lines shall possess a minimum transmissivity of  $1.0 \times 10^{-3}$  m<sup>2</sup>/sec at a loading of 15,000 pounds per square foot and 33% gradient, be manufactured with a 270-mil thick HDPE geonet core bonded on both sides with nonwoven geotextile with a nominal unit weight not less than 10 ounces per square yard and be installed as depicted in Detail 10 on Drawing No. D-728-1143.
17. This permit approves, pursuant to 25 Pa. Code Section 287.231, a request for equivalency review with respect to 25 Pa. Code Section 288.234(g) and (h) providing for the final cover slopes in the Stage IV and Stage V disposal areas to be constructed with 30-foot wide terraces every 50 vertical feet as described in Form Q(9) of the approved application as depicted in Detail 11 on Drawing No. D-728-1144.
18. This permit approves, pursuant to 25 Pa. Code Section 287.231, a request for equivalency review with respect to 25 Pa. Code Section 288.437(b) providing for an alternative protective cover system in areas of the Stage IV and Stage V disposal area with base grades greater than 15% that do not overlay previously disposed waste that consists of a geocomposite drainage material with minimum transmissivity of  $1.6 \times 10^{-4}$  m<sup>2</sup>/sec at a loading of 15,000 pounds per square foot and 33% gradient that is manufactured with a 220-mil thick HDPE geonet core bonded on both sides with nonwoven geotextile with a nominal unit weight not less than 8-ounces per square yard; a 12-inch granular layer possessing a minimum permeability of  $1.0 \times 10^{-2}$  cm/sec and a 2.5-foot layer of fly ash as depicted in Detail 3 on Drawing No. D-728-1142.

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT

Permit No. 300491

- 
19. This permit approves, pursuant to 25 Pa. Code Section 287.231, a request for equivalency review with respect to 25 Pa. Code Section 288.433(b)(1) providing for use of subbase in the Stage IV and Stage V disposal area composed of on-site soil that is more permeable than  $1 \times 10^{-5}$  cm/sec providing that geosynthetic clay liner is placed between the secondary liner geomembrane and prepared subgrade material as described in Form Q(11) of the approved application.
20. This permit modification requires that the Operation Plan be implemented as described in Form 12R of the approved application, subject to the following conditions
- A. The permitted facility is authorized to operate on a 24-hour per day, 7-day per week basis.
  - B. Unless otherwise approved by the Department, the permittee is authorized to dispose of the approved waste streams on an average basis of 7,500 tons per day with a 10,000 ton per day maximum.
  - C. Waste placement within the Stage III and Stage IV disposal areas shall be conducted to prevent runoff of waste contacted surface water into facility's stormwater management system. Waste placement shall be conducted such that a soil barrier is formed and maintained on exterior slopes and that the exposed waste surface is graded towards the interior of the disposal area. Surface water that ponds within the disposal area shall be pumped to a leachate storage impoundment as soon as practicable after the precipitation event has ended. Pumping shall begin within 24 hours or immediately upon the availability of sufficient capacity within the nearest lined impoundment, whichever is later.
  - D. Operations at the permitted facility shall be conducted to minimize and control public nuisances, including, but not limited to, implementation of Noise Mitigation measures described in Section 4.14 of the Harms and Benefits Analysis of the approved application.
  - E. Pursuant to 25 Pa. Code Section 288.232(b), the Department waives the requirements for daily cover at the permitted facility.
21. This permit modification requires that the Water Quality Monitoring Plan be implemented as described in Form 13R of the approved application, subject to the following conditions:
- A. The following groundwater monitoring points shall be sampled and analyzed for all parameters listed in 25 Pa. Code Sections 288.254(a)(1) and (3) with the exception of total metals for wells currently monitoring Stages I, II and III (see Condition No. 21.C below). Sampling and analysis for Stages IV and V shall commence as indicated in Permit Condition No. 21.C below. The results of these analyses shall be reported on Form 14R - Residual Waste Landfill and Disposal Impoundments Quarterly and Annual Water Quality Analyses Report and shall be submitted to the Department on a calendar quarterly basis starting the first calendar quarter after commencement and on an annual basis on the anniversary date thereafter for the following groundwater monitoring wells:

<u>WELL NO.</u>	<u>FORMATION</u>	<u>GRADIENT POSITION</u>
MP-1A	Near surface fractured bedrock	Upgradient
MP-8	Near surface fractured bedrock	Downgradient
MP-18	Near surface fractured bedrock	Downgradient
MP-19	Near surface fractured bedrock	Downgradient

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT

Permit No. 300491

<u>WELL NO.</u>	<u>FORMATION</u>	<u>GRADIENT POSITION</u>
MP-20	Near surface fractured bedrock	Upgradient
MP-21	Near surface fractured bedrock	Downgradient
MP-22	Near surface fractured bedrock	Downgradient
MP-23	Near surface fractured bedrock	Downgradient
MP-24A	Near surface fractured bedrock	Upgradient
MP-25	Fractured bedrock	Upgradient
P-87-5	Water Level Only	Downgradient
MP-27	Near surface fractured bedrock	Downgradient
MP-28	Fractured bedrock	Downgradient
MP-29	Fractured bedrock	Downgradient
MP-30	Fractured bedrock	Downgradient
MP-31	Near surface fractured bedrock	Downgradient
MP-32	Fractured bedrock	Downgradient
MP-33	Fractured bedrock	Downgradient
MP-34	Fractured bedrock	Downgradient
MP-35	Near surface fractured bedrock	Downgradient
PZ-17C	Fractured bedrock	Downgradient

- B. The following surface water monitoring points shall be sampled and analyzed for all parameters listed in 25 Pa. Code Sections 288.254(a)(1) and (3) with the exception of dissolved metals. Sampling and analysis shall commence as indicated in Permit Condition No. 21.C below. The results of these analyses shall be reported on Form 14R - Residual Waste Landfill and Disposal Impoundments Quarterly and Annual Water Quality Analyses Report and shall be submitted to the Department on a calendar quarterly basis starting the first calendar quarter after commencement and on an annual basis on the anniversary date thereafter for the following surface monitoring locations:

<u>SAMPLE POINT</u>	<u>LOCATION</u>	<u>POSITION</u>
SP-1	Unnamed Tributary to Muddy Run	Downgradient
SP-2	Unnamed Tributary to Muddy Run	Downgradient
SP-3	Unnamed Tributary to Blacklick Creek	Downgradient
SW-1	Tributary 44033 to Muddy Run	Downgradient
SW-2	Muddy Run	Downgradient
SW-3	Muddy Run	Downgradient
STR-4	Tributary 64693B to Blacklick Creek	Downgradient
STR-12	Unnamed Tributary to Muddy Run	Downgradient
STR-18	Unnamed Tributary to Muddy Run	Downgradient
STR-21	Unnamed Tributary to Muddy Run	Downgradient
STR-27	Tributary 44010C to Muddy Run	Downgradient
STR-31B	Unnamed Tributary to Muddy Run	Downgradient
STR-34	Unnamed Tributary to Muddy Run	Downgradient
STR-35	Tributary 44033 to Muddy Run	Downgradient
STR-36	Tributary 440033F-2 to Muddy Run	Downgradient
STR-37	Tributary 44033K to Muddy Run	Downgradient
STR-38	Tributary 44033M to Muddy Run	Downgradient
Busija Spring	Unnamed Tributary to Muddy Run	Downgradient

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT

Permit No. 300491

- C. Water quality monitoring shall commence upon permit issuance for the following Stages I, II and III monitoring points:

MP-1A	MP-19	MP-22	MP-25	SP-2
MP-8	MP-20	MP-23	MP-27	SP-3
MP-18	MP-21	MP-24A	SP-1	P-87-5 (water level only)

The permittee shall notify the Department in writing prior to the start of construction in Stage IV. Not less than one (1) year prior to start of disposal operations in Stage IV, water quality monitoring shall commence for the following Stage IV monitoring points:

MP-31	SW-2	STR-36
MP-35	SW-3	STR-37
SW-1	STR-35	STR-38

The permittee shall notify the Department in writing prior to the start of construction in Stage V. Not less than one (1) year prior to start of disposal operations in Stage V, water quality monitoring shall commence for the following Stage V monitoring points:

MP-28	MP-32	PZ-17C	STR-18	STR-31B
MP-29	MP-33	STR-4	STR-21	STR-34
MP-30	MP-34	STR-12	STR-27	Busija Spring

The Department may require earlier commencement of monitoring for any or all the monitoring points for which commencement of monitoring is deferred to augment the groundwater monitoring network should an appearance of contamination be detected.

For each groundwater monitoring well for which commencement of monitoring is deferred, the well must be fully redeveloped to represent current aquifer conditions prior commencement of monitoring. The wells shall be secured by locking well lid, locking well cap, or other approved locking mechanism to prevent tampering. The deferred wells shall be inspected by a certified well installer or licensed professional on a yearly basis to confirm the environmental soundness of the well. A certification report detailing completion of these inspections shall accompany the yearly groundwater report.

- D. If changes in the concentration of parameters for upgradient monitoring wells are indicated, the permittee shall re-evaluate the groundwater flow to assure proper location of the wells. If the upgradient wells show degradation, the permittee shall conduct a groundwater investigation to define background quality and flow characteristics.
- E. The permittee shall submit to the Department an annual evaluation report of all groundwater and surface water sampling and analyses reports. This evaluation shall be performed using appropriate statistical or mathematical methods. This report shall include time series analysis and may include approved methods such as those described in the EPA publication 530-R-09-007, Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance, March 2009. The report shall include a summary of the statistically significant differences in groundwater quality and surface water quality and, if present, a statement identifying the existence of degradation.

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT

Permit No. 300491

22. This permit modification requires that the liner and final cover systems deployed within the Stage IV and Stage V disposal areas conform to the requirements set forth in Form 16R of the approved application, subject to the following conditions:

- A. The liner and final cover systems shall be constructed in accordance with Construction Quality Assurance/Quality Control (QA/QC) Plan presented in Attachment 16R-6 of the approved application.
- B. Specific approval is herein granted for the deployment of the following geosynthetic liner and final cover system materials:

Component	Manufacturer	Material
Geomembrane:		
Liner System	Agru-America GSE Lining Systems Poly-Flex	60-mil MicroSpike HDPE HDT 60-mil 60-mil Textured HDPE
Final Cover	Agru-America GSE Lining Systems Poly-Flex	40-mil MicroSpike HDPE 40-mil MicroSpike LLDPE HDT 40-mil Ultraflex Textured 40-mil 40-mil Textured HDPE 40-mil Textured LLDPE
Geosynthetic Clay Liner:	Agru-America CETCO Lining Technologies GSE Lining Systems	GeoClay NN66 Bentomat DN Resistex DN Bentoliner NWL Bentoliner CAR NWL Bentoliner CAR NWL-35 Bentoliner CAR NWL-60 Bentoliner CNSL
Nonwoven Geotextile:	GSE Lining Systems SKAPS Industries Agru-America	NW6 NW8 NW10 NW16 GE-160 GE-180 GE-110 GE-116 Agrutex 6 Agrutex 8 Agrutex 10 Agrutex 16

**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT**

Permit No. 300491

Component	Manufacturer	Material
Geocomposite Drainage Material: Liner System-Detection Zone	Agru-America GSE Lining Systems	275-mil Geocomposite Fabrinet HS PermaNet 270 Geocomposite
Liner System-Side Slope	SKAPS Industries Agru-America SKAPS Industries GSE Lining Systems	Transnet 270 250-mil Geocomposite Transnet 250 Fabrinet HF
Final Cover	GSE Lining Systems	Fabrinet 225-mil Tendrain 300-mil

C. Generic approval is granted for the geosynthetic materials described in the approved application. Authorization to utilize geosynthetic materials not specifically approved in Permit Condition No. 22.B requires, at least thirty (30) days prior to the initiation of liner system construction activities, that documentation be submitted to the Department demonstrating that the specific materials to be deployed satisfy the material specifications listed in the Appendix A of the QA/QC Plan presented in Attachment 16R-6 of the approved application possesses interface frictional properties necessary to assure slope stability and are compatible with the leachate generated at the facility.

23. This permit modification requires that the Leachate Management Plan be implemented as described in Form 17R of the approved application, subject to the following conditions:

- A. Leachate generated at the permitted facility shall be measured on a daily basis for flow rate in accordance with 25 Pa. Code Section 288.456(a)(1). Flow measurement data collected relative to this condition shall be incorporated into the quarterly monitoring report submission required by Permit Condition No. 35 below.
- B. The chemical composition of the leachate generated at the permitted facility shall be minareted at AVT-01 and analyzed in accordance with 25 Pa. Code Section 288.456(a)(2). The parameters and frequency of analyses shall correspond to the requirements for water quality monitoring as set forth in 25 Pa. Code Section 288.254(a)(1) and (a)(3). The results of the chemical analyses performed relative to this condition shall be incorporated into the quarterly monitoring report submission required by Permit Condition No. 35 below.
- C. The leachate detection zone in the Stage IV and Stage V disposal areas shall be monitored at least once during each calendar week to determine whether liquid is flowing within the detection zones as required by 25 Pa. Code Section 288.435(c) and 289.435(c). If liquid is detected to be flowing from the detection zones, the permittee shall implement the provisions of 25 Pa. Code Section 288.435(d). Detection zone flow rate and chemical analyses shall be incorporated into the quarterly report package. The permittee shall estimate on a weekly basis the volume of liquid flowing from the zone per detection zone monitoring point. If the liquid in the leachate detection zone exceeds 100 gallons per acre per day or is more than 10% of the leachate generation for any week, the permittee shall immediately notify the NWRO Waste Inspector by telephone or e-mail and provide follow up in writing. The permittee shall also submit to the Department within 30 days of verbal notification for review and approval, (a) a plan to locate and remediate the source of the flow as set forth in 25 Pa. Code Section 288.435(e)(1) or, if the source has been located, (b) a report of the cause, source and remediation performed along with a remedial plan to prevent reoccurrence. If a determination as to the source cannot be resolved within the original 30-day period, then the permittee shall implement 25 Pa. Code Section 288.435(e)(2) and (e)(3).

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT

Permit No. 300491

- 
24. This permit modification requires that the Closure and Postclosure Land Use Plan be implemented as described in Form 18R of the approved application. A final cover system containing a cap and drainage layer as required by 25 Pa. Code Section 288.234(a) shall be incrementally deployed in areas that are at final grade as shown on Drawing Nos. D-728-1132 through D-728-1139. The maximum open, uncapped area shall not exceed 66 acres.
25. This permit modification establishes a bond amount determined pursuant to 25 Pa. Code Section 287.331 to be \$36,617,884 in support of this 419.6-acre permit. The Department's approval of financial assurances in the aggregate amount above shall not be construed as approval of any particular cost item appearing in the Bonding Worksheets contained in Form 18R of the approved application. The Department reserves the right to question or reject any individual cost item, or documentary basis for that item, contained in the current cost estimate should that information be reproduced in a future cost estimate.

Surety Bond No. 09092656 dated November 6, 2013, with Homer City Generation, LP as principal and Fidelity and Deposit Company of Maryland as surety for the amount of \$29,762,359 and executed between the permittee and Department remains in effect. Additional financial assurance shall be submitted as follows:

- A. Prior to commencement of construction of Stage IV of the landfill expansion, the permittee shall submit for the Department's for approval an updated landfill closure and postclosure cost estimate for the entire site including the Stage IV expansion area, using Department bond calculation forms and methods. Prior to start of disposal operations in Stage IV, the permittee shall have a Department approved bond or other approved financial assurance method in place for the full approved bond amount for closure and postclosure of the landfill at the end of Stage IV.
- B. Prior to commencement of construction of Stage V of the landfill expansion, the permittee shall submit for the Department's approval an updated landfill closure and postclosure cost estimate including the Stage V expansion area, using Department bond calculation forms and methods. Prior to start of disposal operations in Stage V, the permittee shall have a Department-approved bond or other approved financial assurance method in place for the full approved bond amount for closure and postclosure of the landfill at the end of Stage V.
26. Pursuant to 25 Pa. Code Section 287.211(d), the permittee shall submit to the Department a permit review package on January 8, 2025 summarizing the changes to the operation implemented subsequent to this permit modification and evaluating the permit to determine whether it reflects currently applicable operating requirements, current technology and best management practices.
27. If there is a conflict between the application, its supporting documents and/or amendments and the terms and conditions of this permit, the terms and conditions of this permit shall apply.
28. The permittee shall construct, implement and maintain all structures in accordance with WQ NPDES Permit No. PA0005037, WQ Part II Permit No. 3281205, AQ Title V Operating Permit No. 30-00055, and Water Obstruction and Encroachment Permit No. E32-490-A3 issued in coordination with this permit, which are incorporated herein by reference.
29. Approval of this permit does not guarantee site stability or operational effectiveness. Failure of this site to perform as intended or designed according to the application documents herein approved for any reason shall be sufficient grounds for revocation or suspension of this permit.

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT

Permit No. 300491

---

30. Any final operational, design or other plan developed subsequent to permit issuance which exhibit changes in structure, location, specification or other changes of substance shall be submitted to the Department for subsequent permit action. Any deviation from the plans herein approved shall not be implemented before first obtaining a permit amendment or written approval from the Department.
31. This permit shall not be construed to supersede, amend, or authorize a violation of any of the provisions of any valid and applicable local law, ordinance, or regulations; providing that said local law, ordinance, regulation, or condition is not preempted by the Pennsylvania Solid Waste Management Act, the Act of July 7, 1980, P.L. 380, No. 97, 35 P.S. 6018.101 et seq., or the Municipal Waste Planning, Recycling, and Waste Reduction Act of 1988, 53 P.S. Sections 4000.101-4000.1904.
32. This permit does not authorize nor shall be construed as an approval to discharge industrial waste, including without limitation, any leachate discharge from the permitted area without first obtaining necessary permits required by the Clean Streams Law.
33. This permit shall not be construed to authorize the removal of minerals by surface mining without the permittee first obtaining all necessary permits and authorizations pursuant to the Surface Mining Conservation and Reclamation Act, 52 P.S. Sections 1396.1, et seq., and the Clean Streams Law, 35 P.S. Sections 691.1 et seq.
34. Certification of each component of this facility's design and construction shall be submitted to the Department by a professional engineer, registered in the Commonwealth of Pennsylvania, upon completion of or modification of each phase of construction as set forth in 25 Pa. Code Section 288.202(a). The permittee must notify the Department in writing, within seventy-two (72) hours, before commencing the modification or construction of major phases as defined in 25 Pa. Code Section 288.202(a). The permittee shall submit one original set and one copy of as-built drawings and the construction certification report document to the Department upon completion of the construction activity.

The Department must approve the final certification report prior to any waste disposal.

A registered Pennsylvania professional engineer shall certify in writing on Form 19R, provided by the Department, for each phase of the construction under penalty of law respecting unsworn falsification to authority (18 Pa. C.S. § 4904), indicating that he/she has personally examined the construction of said phase and it is constructed and prepared in accordance with the documents, statements, design, and plans submitted as part of the application as approved by the Department. The above certifications shall include at a minimum the test results required in the approved Construction Quality Assurance/Quality Control Plan in Form 16R.

35. Copies of all required quarterly reports shall be submitted to the Department in two volumes to be divided as follows:

Volume 1 - Groundwater and surface water sampling results

Volume 2 - Leachate sampling and monitoring results  
Leachate detection flow and analysis

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT

Permit No. 300491

---

An original and one copy of each volume shall be submitted to:

Department of Environmental Protection  
Regional Manager, Waste Management  
230 Chestnut Street  
Meadville, PA 16335

36. Copies of the Annual Operation Report as required in 25 Pa. Code Section 288.283 shall be submitted to the Department on or before June 30 of each year. The Annual Operation Report shall be submitted of forms provided by the Department or other approved format. An original and one copy of the Annual Operation Report shall be submitted to:

Department of Environmental Protection  
Regional Manager, Waste Management  
230 Chestnut Street  
Meadville, PA 16335

37. Unless amended by this permit modification or a previously approved permit modification, all design and operational requirements set forth in Solid Waste Permit No. 300491, issued on March 26, 1997 remain valid for this permit modification.