Pennsylvania Department of Environmental Protection

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES
POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) MODULE 2

Applicant: **Homer City Generation, L.P.** Project Site Name: **HCPP Pipeline**

PRE-DEVELOPMENT SITE CHARACTERIZATION

1. Was a pre-development site characterization completed for this project? ☒ Yes ☐ No

   If Yes, describe the activities undertaken.

   Test pits and infiltration tests were performed in areas proposed for permanent facility development requiring Post-Construction Stormwater Management (PCSM) Stormwater Control Measures (SCMs)

2. No. Test Pits completed: 11 No. Boreholes completed: 0

3. Number of Infiltration Tests completed: 11 Method(s): Double-Ring

4. Project Site Area: 5.78 acres Area investigated for infiltration capabilities: 0.50 acres

5. DEP's Pre-Development Site Characterization Spreadsheet has been completed and is attached. ☐ Yes ☒ No

6. The infiltration potential of the site is: ☐ Limited ☐ Marginal ☒ Feasible ☐ Not Recommended

7. If the infiltration potential of the site is limited or is otherwise not advised, explain the limitations.

8. Is the project site located in an area with known karst features? ☐ Yes ☒ No

   If Yes, was a subsurface geotechnical investigation conducted and is a report attached? ☐ Yes ☐ No

9. Are there natural stormwater features on-site that will be protected? ☐ Yes ☒ No

   If Yes, describe the features and any increase or decrease in stormwater runoff volume to the features.

POINTS OF ANALYSIS (POAs)

1. Identify all POAs used for the stormwater analysis and provide the information requested. All runoff from the site must be accounted for.

POA No.	Latitude	Longitude	DA (acres)	Surface Water Name
1	40°27'26.09"	-79°14'46.16"	4.04	Stream 4
2	40°27'20.23"	-79°14'41.71"	2.79	Stream 2
3	40°27'06.45"	-79°14'37.19"	0.41	Stream 46

PCSM SCM INVENTORY

1. Identify all PCSM SCMs planned for the project site and provide the information requested.

SCM ID	SCM Name	Latitude	Longitude	DA Treated (acres)	Infiltration?	Factor of Safety	Design Infiltration Rate or Ksat (in/hr)
1	Rain Garden SCM No. 1	40°27'24.51"	79°14'43.40"	0.99	☒	2	6.69
2	Detention Basin SCM No. 2	40°27'22.93"	79°14'40.39"	0.71	☐		
3	Rain Garden SCM No. 3	40°27'22.29"	79°14'41.65"	1.14	☒	2	1.46
4	Rain Garden SCM No. 4	40°27'06.45"	79°14'37.82"	0.25	☒	2	0.11
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2. Area not treated by an SCM, Earth Disturbance Area (acres): 3.22 Area not treated by an SCM, Project Site Area (acres): 4.86

3. ☐ One or more SCMs will be located off-site. SCM IDs:

PCSM SCM INVENTORY

4. For each infiltration-based SCM identified in Question #1, provide the information requested or attach separate sheets with this information.

SCM ID: 1 through 4 ☒ **Separate sheets attached**

Test Pit / Boring ID	Ground Surface Elevation (ft msl)	Proposed SCM Invert Elevation (ft msl)	Test Pit / Boring Bottom Elevation (ft msl)	Limiting Zone Elevation (ft msl)	Limiting Zone Type	Infiltration Test ID	Infiltration Test Elevation (ft msl)	Infiltration / Ksat Rate (in/hr)	Infiltration Test Method

PCSM SCM INVENTORY					
5. List the critical stages for each SCM and identify the licensed professional and/or company that will sign SCM Construction Certification forms for the SCM.					
SCM ID	**Critical Stages**	**LP Name**	**Company**	**LP Employed by Company**	**Contract**
1	Anti-seep collar	Charles Kane, P.E.	CEC	☒	☐
2	Anti-seep collar	Charles Kane, P.E.	CEC	☒	☐
3	Anti-seep collar	Charles Kane, P.E.	CEC	☒	☐
4	Anti-seep collar	Charles Kane, P.E.	CEC	☒	☐
				☐	☐
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STORMWATER ANALYSIS – RUNOFF VOLUME

Surface Water Name: **Stream 4** **POA(s):** **1**

1. ☐ The design standard is based on volume management requirements in an Act 167 Plan approved by DEP within the past five years.
2. ☒ The design standard is based on managing the net change for storms up to and including the 2-year/24-hour storm.
3. ☐ An alternative design standard is being used.
4. ☒ A printout of DEP's PCSM Spreadsheet – Volume Worksheet is attached.
5. 2-Year/24-Hour Storm Event: 2.53 inches Source of precipitation data: NOAA
6. Stormwater Runoff Volume @ 2-Year/24-Hour Storm, Pre-Construction: 6,191 CF
7. Stormwater Runoff Volume @ 2-Year/24-Hour Storm, Post-Construction: 8,955 CF
8. Net Change (Post-Construction – Pre-Construction Volumes): 2,764 CF
9. Identify all selected structural PCSM SCMs and provide the information requested. ☒ Calculations attached

SCM ID	Series	MRC	Vol. Routed to SCM (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)
1		☐	5,234	1,667	6.69	72	☒	1.5	2,827	5,234	0
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		☐					☐				
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Total Infiltration & ET Credits (CF): 5,234

Other Credits (CF) (Attach Calculations):

Managed Release Credits (CF) (Attach MRC Spreadsheet):

Volume Required to Manage (CF): 2,764

Total Credits (CF): 5,234

STORMWATER ANALYSIS – PEAK RATE

Surface Water Name: Stream 4 **POA(s): 1**

1. ☐ The design standard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.
2. ☒ The design standard is based on managing the net change for 2-, 10-, 50-, and 100-year/24-hour storms.
3. ☐ An alternative design standard is being used.
4. ☒ DEP's PCSM Spreadsheet – Rate Worksheet was used for peak rate calculations and is attached.
5. ☐ Alternative rate calculations are attached.
6. Identify precipitation amounts. Source of precipitation data: NOAA

2-Year/24-Hour Storm:	2.53	10-Year/24-Hour Storm	3.57
50-Year/24-Hour Storm:	4.78	100-Year/24-Hour Storm	5.35

7. Identify all SCMs used to mitigate peak rate differences and provide the requested information.

SCM ID	Inflow to SCM (cfs)				Outflow from SCM (cfs)			
	2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr
1	2.27	3.63	5.30	6.69	0.13	0.54	0.79	0.88

8. Report peak rates for pre-construction and post-construction with SCMs and identify the differences.

Design Storm	Pre-Construction Peak Rate (cfs)	Post-Construction Peak Rate (with SCMs) (cfs)	Difference (cfs)
2-Year/24-Hour	3.14	2.64	-0.50
10-Year/24-Hour	6.38	5.79	-0.59
50-Year/24-Hour	10.60	9.45	-1.15
100-Year/24-Hour	12.68	11.21	-1.47

STORMWATER ANALYSIS – WATER QUALITY

☒ A printout of DEP's PCSM Spreadsheet – Quality Worksheet is attached for all surface waters receiving discharges.

OTHER INFORMATION

1. ☒ A long-term operation and maintenance (O&M) plan has been prepared for each SCM.
2. ☒ A long-term O&M plan will be recorded with a legal instrument for each property containing an SCM.
3. ☒ PCSM Plan Drawings have been developed for the project and are attached to the NOI/application.
4. ☒ The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.
5. ☒ Recycling and proper disposal of materials associated with PCSM SCMs are addressed as part of long-term operation and maintenance of the PCSM SCMs.
6. ☐ There are pre-construction stormwater discharges to wetlands from the project site.

	Pre-Construction		Post-Construction		
Wetland ID	**Drainage Area (ac)**	**Volume (CF)**	**Drainage Area (ac)**	**Volume (CF)**	**Ponding Depth Increase or Decrease (±%)**

7. Describe the sequence of PCSM SCM implementation in relation to earth disturbance activities.

   See Section 7.0 of the PCSM/SR Narrative

8. Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM SCMs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts.

   See Individual NPDES Application Section 12: Naturally Occurring Geologic Condition Assessment Report

9. Thermal Impacts: check the appropriate box(es) if any of the following (a. – c.) are true:

☒ a. One or more peak rate control SCMs are proposed that will receive stormwater from a drainage area containing more than 25% impervious surface.

i. Drainage Area of SCM: **0.99** acres

ii. Drainage Area of Surface Water at DP of SCM: **9.95** acres

iii. Ratio of SCM Drainage Area : Surface Water Drainage Area: **9.95** %

If the value reported for a.iii. exceeds 10%, attach a quantitative thermal impact analysis.

☐ b. A Wet Basin or Engineered Stormwater Treatment Wetland is proposed that does not include shading and/or a reversed slope outlet pipe *(if true, attach a quantitative thermal impact analysis)*.

STORMWATER ANALYSIS – RUNOFF VOLUME

Surface Water Name: **Stream 2** **POA(s):** **2**

1. ☐ The design standard is based on volume management requirements in an Act 167 Plan approved by DEP within the past five years.
2. ☒ The design standard is based on managing the net change for storms up to and including the 2-year/24-hour storm.
3. ☐ An alternative design standard is being used.
4. ☒ A printout of DEP's PCSM Spreadsheet – Volume Worksheet is attached.
5. 2-Year/24-Hour Storm Event: 2.53 inches Source of precipitation data: NOAA
6. Stormwater Runoff Volume @ 2-Year/24-Hour Storm, Pre-Construction: 3,944 CF
7. Stormwater Runoff Volume @ 2-Year/24-Hour Storm, Post-Construction: 7,574 CF
8. Net Change (Post-Construction – Pre-Construction Volumes): 3,631 CF
9. Identify all selected structural PCSM SCMs and provide the information requested. ☒ Calculations attached

SCM ID	Series	MRC	Vol. Routed to SCM (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)
2		☐	4,319	1,667	0.00	72	☒	0	0	0	0
3		☐	5,804	1,995	1.46	72	☒	1.5	1,920	4,541	835
		☐					☐				
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Total Infiltration & ET Credits (CF): 5,376

Other Credits (CF) (Attach Calculations):

Managed Release Credits (CF) (Attach MRC Spreadsheet):

Volume Required to Manage (CF): 3,631

Total Credits (CF): 5,376

STORMWATER ANALYSIS – PEAK RATE

Surface Water Name: Stream 2 **POA(s): 2**

1. ☐ The design standard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.
2. ☒ The design standard is based on managing the net change for 2-, 10-, 50-, and 100-year/24-hour storms.
3. ☐ An alternative design standard is being used.
4. ☒ DEP's PCSM Spreadsheet – Rate Worksheet was used for peak rate calculations and is attached.
5. ☐ Alternative rate calculations are attached.
6. Identify precipitation amounts. Source of precipitation data: NOAA

2-Year/24-Hour Storm:	2.53	10-Year/24-Hour Storm	3.57
50-Year/24-Hour Storm:	4.78	100-Year/24-Hour Storm	5.35

7. Identify all SCMs used to mitigate peak rate differences and provide the requested information.

SCM ID	Inflow to SCM (cfs)				Outflow from SCM (cfs)			
	2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr
2	1.81	2.77	3.92	4.48	0.41	0.50	0.71	1.55
3	1.01	1.63	2.39	2.74	0.38	0.57	0.80	0.96

8. Report peak rates for pre-construction and post-construction with SCMs and identify the differences.

Design Storm	Pre-Construction Peak Rate (cfs)	Post-Construction Peak Rate (with SCMs) (cfs)	Difference (cfs)
2-Year/24-Hour	1.73	1.17	-0.56
10-Year/24-Hour	3.85	3.01	-0.84
50-Year/24-Hour	6.69	5.03	-1.66
100-Year/24-Hour	8.12	6.03	-2.09

STORMWATER ANALYSIS – WATER QUALITY

☒ A printout of DEP's PCSM Spreadsheet – Quality Worksheet is attached for all surface waters receiving discharges.

OTHER INFORMATION

1. ☒ A long-term operation and maintenance (O&M) plan has been prepared for each SCM.
2. ☒ A long-term O&M plan will be recorded with a legal instrument for each property containing an SCM.
3. ☒ PCSM Plan Drawings have been developed for the project and are attached to the NOI/application.
4. ☒ The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.
5. ☒ Recycling and proper disposal of materials associated with PCSM SCMs are addressed as part of long-term operation and maintenance of the PCSM SCMs.
6. ☐ There are pre-construction stormwater discharges to wetlands from the project site.

	Pre-Construction		Post-Construction		
Wetland ID	**Drainage Area (ac)**	**Volume (CF)**	**Drainage Area (ac)**	**Volume (CF)**	**Ponding Depth Increase or Decrease (±%)**

7. Describe the sequence of PCSM SCM implementation in relation to earth disturbance activities.

   See Section 7.0 of the PCSM/SR Narrative

8. Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM SCMs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts.

   See Individual NPDES Application Section 12: Naturally Occurring Geologic Condition Assessment Report

9. Thermal Impacts: check the appropriate box(es) if any of the following (a. – c.) are true:

☒ a. One or more peak rate control SCMs are proposed that will receive stormwater from a drainage area containing more than 25% impervious surface.

i. Drainage Area of SCM: **1.14** acres

ii. Drainage Area of Surface Water at DP of SCM: **59.99** acres

iii. Ratio of SCM Drainage Area : Surface Water Drainage Area: **1.90** %

If the value reported for a.iii. exceeds 10%, attach a quantitative thermal impact analysis.

☐ b. A Wet Basin or Engineered Stormwater Treatment Wetland is proposed that does not include shading and/or a reversed slope outlet pipe *(if true, attach a quantitative thermal impact analysis)*.

STORMWATER ANALYSIS – RUNOFF VOLUME

Surface Water Name: **Stream 46** **POA(s):** **3**

1. ☐ The design standard is based on volume management requirements in an Act 167 Plan approved by DEP within the past five years.
2. ☒ The design standard is based on managing the net change for storms up to and including the 2-year/24-hour storm.
3. ☐ An alternative design standard is being used.
4. ☒ A printout of DEP's PCSM Spreadsheet – Volume Worksheet is attached.
5. 2-Year/24-Hour Storm Event: 2.53 inches Source of precipitation data: NOAA
6. Stormwater Runoff Volume @ 2-Year/24-Hour Storm, Pre-Construction: 786 CF
7. Stormwater Runoff Volume @ 2-Year/24-Hour Storm, Post-Construction: 921 CF
8. Net Change (Post-Construction – Pre-Construction Volumes): 136 CF
9. Identify all selected structural PCSM SCMs and provide the information requested. ☒ Calculations attached

SCM ID	Series	MRC	Vol. Routed to SCM (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)
4		☐	853	250	0.11	72	☒	1.5	250	149	105
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		☐					☐				
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		☐					☐				
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Total Infiltration & ET Credits (CF): 253

Other Credits (CF) (Attach Calculations):

Managed Release Credits (CF) (Attach MRC Spreadsheet):

Volume Required to Manage (CF): 136

Total Credits (CF): 253

STORMWATER ANALYSIS – PEAK RATE

Surface Water Name: Stream 46 **POA(s): 3**

1. ☐ The design standard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.
2. ☒ The design standard is based on managing the net change for 2-, 10-, 50-, and 100-year/24-hour storms.
3. ☐ An alternative design standard is being used.
4. ☒ DEP's PCSM Spreadsheet – Rate Worksheet was used for peak rate calculations and is attached.
5. ☐ Alternative rate calculations are attached.
6. Identify precipitation amounts. Source of precipitation data: NOAA

2-Year/24-Hour Storm:	2.53	10-Year/24-Hour Storm	3.57
50-Year/24-Hour Storm:	4.78	100-Year/24-Hour Storm	5.35

7. Identify all SCMs used to mitigate peak rate differences and provide the requested information.

SCM ID	Inflow to SCM (cfs)				Outflow from SCM (cfs)			
	2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr
2	0.40	0.73	1.14	1.34	0.10	0.46	0.83	0.95

8. Report peak rates for pre-construction and post-construction with SCMs and identify the differences.

Design Storm	Pre-Construction Peak Rate (cfs)	Post-Construction Peak Rate (with SCMs) (cfs)	Difference (cfs)
2-Year/24-Hour	0.51	0.22	-0.29
10-Year/24-Hour	1.00	0.82	-0.18
50-Year/24-Hour	1.63	1.46	-0.17
100-Year/24-Hour	1.94	1.71	-0.23

STORMWATER ANALYSIS – WATER QUALITY

☒ A printout of DEP's PCSM Spreadsheet – Quality Worksheet is attached for all surface waters receiving discharges.

OTHER INFORMATION

1. ☒ A long-term operation and maintenance (O&M) plan has been prepared for each SCM.
2. ☒ A long-term O&M plan will be recorded with a legal instrument for each property containing an SCM.
3. ☒ PCSM Plan Drawings have been developed for the project and are attached to the NOI/application.
4. ☒ The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.
5. ☒ Recycling and proper disposal of materials associated with PCSM SCMs are addressed as part of long-term operation and maintenance of the PCSM SCMs.
6. ☐ There are pre-construction stormwater discharges to wetlands from the project site.

	Pre-Construction		Post-Construction		
Wetland ID	**Drainage Area (ac)**	**Volume (CF)**	**Drainage Area (ac)**	**Volume (CF)**	**Ponding Depth Increase or Decrease (±%)**

7. Describe the sequence of PCSM SCM implementation in relation to earth disturbance activities.

   See Section 7.0 of the PCSM/SR Narrative

8. Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM SCMs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts.

   See Individual NPDES Application Section 12: Naturally Occurring Geologic Condition Assessment Report

9. Thermal Impacts: check the appropriate box(es) if any of the following (a. – c.) are true:

☒ a. One or more peak rate control SCMs are proposed that will receive stormwater from a drainage area containing more than 25% impervious surface.

i. Drainage Area of SCM: **.25** acres

ii. Drainage Area of Surface Water at DP of SCM: **4.40** acres

iii. Ratio of SCM Drainage Area : Surface Water Drainage Area: **5.68** %

If the value reported for a.iii. exceeds 10%, attach a quantitative thermal impact analysis.

☐ b. A Wet Basin or Engineered Stormwater Treatment Wetland is proposed that does not include shading and/or a reversed slope outlet pipe *(if true, attach a quantitative thermal impact analysis)*.

☐	c.	There will be post-construction undetained areas, within the limit of disturbance, that contain impervious surface.
	i.	Undetained Impervious Area: acres
	ii.	Drainage Area of Surface Water Receiving Stormwater from Undetained Impervious: acres
	iii.	Ratio of Undetained Impervious : Surface Water Drainage Area: %
		If the value reported for c.iii. exceeds 10%, attach a quantitative thermal impact analysis.
☒	d.	A quantitative thermal impact analysis is not required.

IMPERVIOUS SURFACES (MULTI-LOT DEVELOPMENT ONLY)							
Tax Parcel / Lot ID No.	SCM ID(s) Used to Treat Lot Stormwater		Lot Area (SF)	Planned Impervious (SF)[1]	Maximum Allowable Impervious, As Designed (SF)[2]	Maximum Allowable Impervious, Per Ordinance (SF)[3]	Objective Met?[4]
	Rate	Volume / WQ					
							☐
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1 Enter the impervious area as presented on PCSM Plan Drawings.

2 Report the maximum allowable impervious on the lot according to the stormwater analysis and SCM design.

3 List the maximum allowable impervious on the lot to meet requirements of a local ordinance, if applicable.

4 Check the box if either 1) Maximum Allowable Impervious, As Designed is at least 110% of Planned Impervious or 2) Planned Impervious is equal to Maximum Allowable Impervious, Per Ordinance. If the box is checked and the maximum impervious area for the lot is recorded, the permittee will not be responsible for identifying new impervious added to a lot on record drawings after a lot is sold during the term of permit coverage.

PCSM PLAN PREPARER

☒ I am trained and experienced in PCSM methods. ☒ I am a licensed professional.

No. years of experience preparing PCSM Plans: 21

Name:	Charles Kane, P.E,	Title:	Principal
Company:	Civil & Environmental Consultants, Inc.	Phone No.:	724-327-5200
Address:	4350 Northern Pike, Suite 141	Email:	ckane@cecinc.com
City, State, ZIP:	Monroeville, PA 15146	License No.:	PE077549
License Type:	Professional Engineer	Exp. Date	9/30/2025

PCSM Plan Preparer Signature

9/24/2025

Date

Identify those who assisted the individual identified above in preparing the PCSM Plan:

Name	Company	Field	LP?	License Type
			☐	
			☐	
			☐	
			☐	
			☐	