

Transcontinental Gas Pipe Line Company, LLC

Section 1-1 – Erosion and Sediment Control Permit Application Attachment 1-1.1 - Supporting Information Attachment 1-1.2 – Discharge Point Summary Tables Attachment 1-1.3 – Permit Modules

Regional Energy Access Expansion Project

April 2021

(Revised July 2021) (Revised March 2022) 3800-PM-BCW0019b 8/2020
Application

pennsylvania

DEPARTMENT OF ENVIRONMENTAL
PROTECTION

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF CLEAN WATER

EROSION AND SEDIMENT CONTROL PERMIT FOR DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES APPLICATION

Before completing this form, read the step-by-step instructions provided in the individual permit package.

			DEP / CCD USE ONLY	
Dat	te Received:		Permit ID:	
	Application Co	mplete	Date of: Return Withdrawal Denial	
Dat	te Determined (Complete:		
Iss	uance Date:		Date Resubmission Received:	
Effe	ective Date:		Expiration Date:	
	_			_
			GENERAL INFORMATION	
1.	Applicant Nan	ne(s): T	ranscontinental Gas Pipe Line Company, LLC	
2.	Appl. Type:	⊠ New	☐ Renewal ☐ Major Amendment ☐ Minor Amendment ☐ Permit No. PA ESG830021002-00	
3.	Project Descri	iption:	Transco, indirectly owned by The Williams Companies, Inc. (Williams), is seeking authorization from the Federal Energy Regulatory Commission (FERC or Commission) under Section 7(c) of the Natural Gas Act and Part 157 of the Commission's regulations, to construct, own, operate, and maintain the proposed Project facilities	
			The Project is an expansion of Transco's existing natural gas transmission system that will enable Transco to provide an incremental 829,400 dekatherms per day (Dth/d) of year-round firm transportation capacity from the Marcellus Shale production area in northeastern Pennsylvania (PA) to multiple delivery points along Transco's Leidy Line in PA, Transco's mainline at the Station 210 Zone 6 Pooling Point in Mercer County, New Jersey (NJ) and multiple delivery points in Transco's Zone 6 in NJ, PA, and Maryland (MD). The Project will consist of the following components:	
			•Approximately 22.2 miles of 30-inch-diameter pipeline partially collocated with Transco's Leidy Line A from milepost (MP) 0.00 to MP 22.32 in Luzerne County, PA (Regional Energy Lateral);	
			 Approximately 13.8 miles of 42-inch-diameter pipeline collocated with Transco's Leidy Line System from 	
			MP 43.72 to MP 57.50 in Monroe County, PA (Effort Loop);	
			New electric motor driven compressor station identified as Compressor Station 201 with	
			9,000 nominal horsepower (HP) in Gloucester County, NJ;	
			 Addition of two gas-fired turbine driven compressor units with 31,800 nominal HP at International Organization for Standardization (ISO) conditions at 	
			existing Compressor Station 505 in Somerset County, NJ, to accommodate the abandonment and replacement of approximately 16,000 HP from eight existing internal combustion enginedriven compressor units and increase the certificated station compression by 15,800 HP;	
			 Addition of two gas-fired turbine driven compressor units with 63,742 nominal HP at ISO conditions and 	
			modification of three existing compressors at existing Compressor Station 515 in Luzerne County, PA to support the Project and to accommodate the abandonment and replacement of approximately 17,000 HP from five existing gas-fired reciprocating engine driven compressors and increase the certificated station compression by 46,742 HP;	
			Uprate and rewheel two existing electric motor-driven compressor units at existing	
			Compressor Station 195 in York County, PA to increase the certificated station compression by 6,000 HP and accommodate the abandonment of two existing gas-fired reciprocating engine driven compressors which total approximately 8,000 HP of compression;	

	1.4 U.C. (1		0 000.		-		
		s at existing Compresso			-	-1' 00=	7 '
	•Uprate one Middlesex C	existing electric motor-dounty, NJ	iriven compressor uni	t at Comp	ressor St	ation 207	' IN
	to increase t	ne certificated station co	mpression by 4,100 l	HP;			
	 Modification 	ns to three (3) existing p	ipeline tie-ins in PA (I	Hildebrand	t Tie-in,		
	Lower Demu	nds REL Tie-in, and Ca	rverton Tie-in);				
	Addition of a County, PA	egulation controls at an	existing valve setting	on Trans	co's Mair	ıline "A" i	n Bucks
	(Mainline A F	degulator);					
	 Modification 	s at the existing Delawa	are River Regulator in	Northamp	ton Cour	nty, PA;	
	Modification	s at the existing Center	ville Regulator in Som	erset Cou	inty, NJ;		
		s to the existing valves a cer County, NJ;	and piping at the Prin	ceton Jun	ction (Sta	ation 210	Pooling
	 Modification Lawnside Ma 	ns to three (3) existing d kR Station,	lelivery meter stations	in NJ (Ca	ımden M	&R Statio	on,
	and Mt. Laur	el M&R Station);					
	Modification	s to one (1) existing del	ivery meter station in	MD (Beav	er Dam I	/I&R Stat	tion);
	•Contractual NJ	changes (no modification	ons) at ten (10) existir	g delivery	meter st	ations in	PA and
	Spruce Run	enterville Meter Station Meter Station, Marcus H n, Morgan Meter Station	look Meter Station, Iv	yland Met	er Station	n, Repau	ро
	•	ncillary facilities, such a	as mainline valves (M	LVs), cath	odic prot	ection,	
		nspection device (e.g.,	nia) launchers and re	caivare in	DA: and		
		proved, and new acces	. •			as in PA	NI I
	and MD	proved, and new acces	3 Todas and contracte	n yarus/st	aging are	as III A	, 140,
4.	4. Project Activity: Road Maintena	nce	esting 🛛 Oil and	Gas [Other:		
5.			ial Protection Waters	(iviodule 3	Allacrie	u)	
7.							
8.	8. Phased Project	No. phases:		o. phases	complete		
		PROJECT SITE IN	IFORMATION				
1.		Access Expansion Pro	oject				
2.	2. Total Project Site Area: 1,323	acres					
3.	3. Project Site Impervious Area – Pre-C *See Attachment 4 – DEP PCSM Workshe			ent of Tota	d:]		%
4.	4. Project Site Impervious Area – Post-C			ent of Tota	nl:]		%
_							
5.	 Hydric soils or other wetland features If Yes, the wetland determination 	•	•	s U No)		
6.		icipality Name	attori.	City	Boro	Twp	State
٠.	·	•	onkina Kingatan	□		•	
	Bucks, Chester, and Monroe Low Tun Whi	k, Bear Creek, Plains, Joer Mt. Bethel, Ross, Chokhannock, Lower Makefeland and Dallas Towns	estnuthill, ield, East ships				PA
	vvyc	ming, West Wyoming, a	and Lanin Borougn				

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7.	County Name	Municipality Name		City	Boro	Twp	State
							PA
8.	Site Location Address						
	See Attachment 1-1.1						
9.	Site Location City	State	ZIP+4				
	See Attachment 1-1.1						

		OPER	RATOR INF	ORMATIC	ON			
1.	Operator Name:	To Be Determined		2.	Contact Na	ne:		
3.	Operator Address:			4.	Operator Ph	none:		_
5.	Operator City, State, ZIP:							_
6.	Operator's Role in Project:	☐ General Contra	ctor 🗌 Co	onsultant	☐ Excavation	on Contra	ctor 🗌 Other	
7.	Operator's Responsibilities:							
1.	Operator Name:			2.	Contact Na	me:		
3.	Operator Address:			4.	Operator Ph	none:		
5.	Operator City, State, ZIP:							
6.	Operator's Role in Project:	☐ General Contra	actor 🗌 Co	onsultant	☐ Excavation	on Contrac	ctor 🗌 Other	
7.	Operator's Responsibilities:							
		EARTH DIS	STURBANC	E INFOR	MATION			
1.	Total Earth Disturbance Are	ea 672 acre	es 29,	,272,756	sf			
2.	Pre-Construction Impervious	s Area: s	sf				-	
	*See Attachment 4 – DEP P	CSM Worksheet within ea	ach PCSM nar	rative (Section	on 3-1 to 3-4)]	
3.	Post-Construction Imperviou	us Area:	sf				٦	
	*See Attachment 4 – DEP P						_	
4.	Pre-Construction/Present La	• •			onstruction La	and Use(s		
	Agricultural Land	12	%		tural Land		12	_ %
	Industrial/Commercial Land	9	%	Industr	ial/Commerci	al Land	8	_ %
	Open Land	29	%	Open L	and		69	_ %
	Residential Land	2	%	Reside	ntial Land		2	<u></u> %
	Transportation Land	4	%	Transp	ortation Land		4	_ %
	Upland Forest/Woodland	41	%	Upland	Forest/Wood	lland	3	<u></u> %
	Wetlands/Open water	3	%	Wetlan	ds/Open Wat	er	2	_ %
6. 7.		e at the center of the	proposed di	sturbed are		nd draina	ge is attached.	
	Latitude:	-	See Attachm	ent 1-1.1				
8.	Horizontal Reference Datum			D of 1983	☐ WGS	of 1984	Unknown	
9.	There will be off-site constru	• • •						
10.	If Yes, identify the nature of	known off-site suppo	rt activities v	whose dist				
	•	Off-Site Support Act	tivity		Distance fr	om Site	Disturbance Are	a
		5 Contractor Yard			1.03	mi	3.6 acres	i
		Regulator Contractor			0.15	mi	2.41 acres	;
11.	Identify any other off-site su	•		e is not inc			·	
	Description of	Off-Site Support Act	tivity		Distance fr	om Site	Disturbance Are	а
						mi	acres	;
						mi	acres	;

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12.	2. Check the appropriate box concerning fill material (see in	nstructions):
	☐ No fill material is expected to be imported to the proj	ect site.
	It is expected that fill will be needed for this project. environmental due diligence when identified.	The source of fill has not yet been determined but will undergo
	☐ It is expected that fill will be exported from the pro- determined the material to be clean fill. DEP's online	ject. The applicant has identified the source of the fill and has e Certification of Clean Fill form has been submitted.

	EARTH DISTURBANCE IN	FORMATION (CONTINUED)								
	will be needed for this project, utilized in accordance with DEP		at is being remediated to Act 2							
determined it to be re	will be needed for this project egulated fill. The regulated fill MGR096 authorization dated:									
and has determined	will be needed for this project, what it does not meet criteria for 's Waste Management Program	r clean fill. The applicant is s								
13. The site is enrolled in DEF	's Act 2 Program.		☐ Yes ⊠ No							
14. The site was previously er	4. The site was previously enrolled in DEP's Act 2 Program and cleanup standards have been met. Yes No									
15. Is Act 537 sewage planning	g approval needed for this project	ct? ☐ Yes ⊠ No								
The Act 537 approval lette	r is attached to the NOI. Y	es No (will be submitted	I prior to approval) 🛛 N/A							
16. A Chapter 105 permit or a	uthorization is required. 🛛 🖂 Y	es 🗌 No								
17. If Yes, identify the necessary	ary authorization. 🛛 Joint Per	rmit] Waiver							
18. Other DEP/CCD permits of	r authorizations are required.	⊠ Yes □ No								
19. If Yes, identify the necessary	ary authorizations. 401 Water	Quality Certification, Air Quality	y Plan Approval							
	EXISTING	PERMITS								
Identify all environmental perm	its issued by DEP/CCD/EPA or a	are pending for this facility/proje	ect site within the past 5 years.							
Type of Permit	Permit No.	Date Issued	Issued By							
	COMPLIANO	CE HISTORY								
	perator in violation of any DEP roor any other facility or project sit		⊠ Yes □ No							
If "Yes," list each permit, orde provide information on all perm	r or schedule of compliance and nits.	d provide current compliance s	tatus. Use additional sheets to							

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Permit Prograi	m: Chapter 102, Chapter 105, PAG-10		Permit No.:	ESG830019002- 00	
				ESG03000150001, ESG00350150001, ESG00081150001	
				E41-649	
				E19-311, E36-947, E-38-195, E40-769,E49-336, E54-360, E58-315, E66-160, E41-667, E18-495,	
				PAG109632	
Brief Description	on of Non-Compliance: Consent Assessment of Civil Pen	alty, Rep	orts past due, Oper	Trench Violation.	
Steps Taken to	o Achieve Compliance	Date(s) Compliance Achieved			
1. Conse	ent Assessment of Civil Penalty	1.	9/20/2020		
2. Conse	ent Assessment of Civil Penalty. Permits being obtained to	2.	8/9/2020		
complete char	nnel restoration	3.	9/20/2020		
3. Conse	ent Assessment of Civil Penalty	4.	12/14/2017		
4. All pa	st due reports were provided to PADEP	5.	8/14/2021		
5. Back	filled Trench and Restored right-of-way				
Current Comp	liance Status: 🛛 In Compliance 🔲 In Non-Cor	npliance			

				STORMWATER DISCHA	RGE INFORM	IATION			
1.	List all s	tormwater discha	rge points during o	construction and provide the informate	tion requested b	pelow (see instructions).	[☐ Not Applica	able
Dis	charge	LATITUDE	LONGITUDE		RE	CEIVING WATERS			
	_	Degrees	Degrees	Name of Receiving Waters	Ches. Bay?	Non-Surface Waters	Ch. 93 Class.	Impaired?	TMDL?
						Ц п			
	See A	Attachment 1-1.	.2 for During Con	struction Stormwater Discharge I	nformation				
2.	List all s	tormwater discha	rge points after co	nstruction and stabilization are con	nplete and prov	ride the information reque	ested below. [☐ Not Applica	able
Discharge Point No. Degrees Degrees Name of Receiving Waters Ches. Bay? Non-Surface Waters Ch. 93 Class. Impaired? TMDL? See Attachment 1-1.2 for During Construction Stormwater Discharge Information See Attachment III									
	_	Degrees	Degrees	Name of Receiving Waters	Ches. Bay?	Non-Surface Waters	Ch. 93 Class.	Impaired?	TMDL?
				i 2					
	See At	tacnment 1-1.2	for After Constru	iction Stormwater Discharge Info	rmation				
3.	Will any	of the points iden	tified above discha	rge to a storm sewer system?	Yes 🛛 No	Is the storm sewer	an MS4 or CSS?	☐ Yes	⊠ No
	Name of	storm sewer owr	ner/operator:			Discharge points d	ischarging to stor	m sewer:	
4.	Identify a	and describe all n	on-stormwater disc	charges that are expected to occur dur	ring permit cove	erage. Describe the frequency	uency and volume	e of all such dis	scharges.
							Lateral in Luzern	e County. The	e discharge
	volulile i	is 2.5 million and	2 million gallons of	water respectively. The water is sour	ced from the St	usquenanna River.			
	☐ No n	non-stormwater di	scharges are antici	pated.					
5.	Will ther	e be anv new or i	ncreased discharge	e to non-surface waters prior to reachi	ng surface wate	ers? 🛛 Yes 🗆] No		
		•	J	•	· ·			ned by the an	plicant. and
								σ, αρ	,, and

	DISCHARGES TO IMF	PAIRED WATERS								
1.	Are stormwater discharges anticipated to impaired waters dur	ring or following construction activities?		☐ No						
2.	If Yes to #1, is Antidegradation Module 3 attached to the appl	ication?		☐ No						
3.	Is there an EPA-approved TMDL for the impaired waters?			☐ No						
4.	If Yes to #3, is there a WLA(s) in the TMDL that would apply t	to the applicant's discharges?	☐ Yes	⊠ No						
5.	If Yes to #4, explain in the space provided or in a separate att	tachment how the discharges will comply	with the W	/LA(s).						
	CERTIFICATION FO	R APPLICANTS								
that destruction of information informatio	ertify under penalty of law and subject to the penalties of 18 Part this document and all attachments were prepared under signed to assure that qualified personnel properly gathered and the person or persons who manage the system, or those perormation submitted is, to the best of my knowledge and belief, and conditions of the permit until the Notice of Termination sulting in earth disturbance until all criteria specified in the permensed professional or a designee is present on-site and be assibility of fine and imprisonment for knowing violations.	my direction or supervision in accordad evaluated the information submitted. Expressed in the information submitted is a constitute, accurate, and complete. I certify the in (NOT) is submitted. I will not comment are met for commencing construction. The improvement is a construction of the improvement in the improve	nce with a sased on not he informate in the informate in core in core in core in the information in the info	a system by inquiry ation, the de by the de histruction are that a con of the						
Jos	seph Dean	Manager - Permitting								
	plicant Name (type or print legibly)	Official Title								
	1 (1)									
- 3	osept 10m	03/02/2022								
Аp	plicant Signature	Date Signed								
	CERTIFICATION FO	R OPERATORS								
res imp	nderstand that I am assuming joint and severable responsib ponsibilities, and non-compliance with the Chapter 102 permit, plement the requirements of the permit and the approved des ued permit coverage prior to implementing changes to the plan	as a co-permittee of this permit coveraging plans and will notify the permittee a	e. I certify	that I will						
Op	erator Name (type or print legibly)	Official Title								
Op	erator Signature	Date Signed								
Ор	erator Name (type or print legibly)	Official Title								
Ор	erator Signature	Date Signed								

ATTACHMENT 1-1.1 SUPPORTING INFORMATION

Regional Energy Access Expansion Project ESCP Permit Application Transcontinental Gas Pipe Line Company, LLC Attachment 1-1.1 Supporting Information

Attachment 1-1.1 Supporting Information

Project Component	Site	Site Location City	ZIP Code	County	Municipality	Total Project Area/Proje ct Site (Acre)	Total Disturbed Area (Acre)	Latitude / Longitude	U.S.G.S. 7.5 min. Topographic Quadrangle	Receiving Waters	Chapter 93, Designated Use Stream Classification	Chapter 93, Existing Use Stream Classification	Siltation Impaired			
	Pipeline	-		Luzerne	Buck, Bear Creek, Plains, Jenkins, Kingston, Dallas, Wyoming, West Wyoming, Laflin		404.87 (includes CS 515 and sites below)	41.173337, -75.671706 (eastern terminus) 41.346917, -75.946263 (western terminus)					Stony Run (Desig - HQ-CWF,MF), Shades Cree Creek (Desig-HQ-CWF,MF), Snider Run (Desig HQ-CWF,MF), Bear Creek (Desig-HQ-CWF CWF,MF), Mill Creek (Desig-CWF,MF, Existing CWF,MF), Susquehanna River(Desig - WWF,M Toby Creek(Desig-CWF,MF), Trou	g-HQ-CWF,MF), Mea MF), Little Bear Cree HQ-CWF,MF), Gard F), Abrahams Creek	dow Run (Desig- ek (Desig-HQ- ner Creek (Desig - (Desig - CWF,MF),	No
	CY-LU-001	Wyoming	18644	Luzerne	Wyoming		1.23 (Included within above total)	41.309139, 75.849086		Abrahams Creek	CWF, MF	-	No			
	CY-LU-002	Wilkes-Barre	18702	Luzerne	Laflin		11.4 (Included within above total)	41.28491, -75.79026		Gardner Creek	CWF, MF	-	No			
Regional	MLV-515RA20	Wilkes-Barre	18702	Luzerne	Bear Creek Township	931.98	0.46 (Included within above total)	41.25279, -75.75856	Kingston, Pittston, Avoca, Wilkes-Barre	Mill Creek	CWF, MF	HQ-CWF, MF	No			
Energy Lateral	MLV-515RA30	Wyoming	18644	Luzerne	Wyoming Borough	33130	0.91 (Included within above total)	41.30411, -75.84662	East, Pleasant View Summit	Susquehanna River	WWF	-	No			
	Carverton Tie-in	Wyoming	18644	Luzerne	West Wyoming Borough		0.83 (Included within above total)	41.32053, -75.87270		Abrahams Creek	CWF, MF	-	No			
	Lower Demunds REL Tie-in	Dallas	18612	Luzerne	Dallas Township		0.17 (Included within above total)	41.34652, -75.94551		Trout Brook	CWF, MF	-	No			
	Hildebrandt Tie- in/MLV-515RA40	Dallas	18612	Luzerne	Dallas Township		0.31 (Included within above total)	41.34692, -75.94629		Toby Creek, Trout Brook	CWF, MF (same for each)	-	No			
	Laflin Borough Stream Stabilization	Wilkes-Barre	18702	Luzerne	Laflin Borough		0.94 (Included within above total)	41.28925, -75.80209		Gardner Creek	CWF, MF	-	No			

Regional Energy Access Expansion Project ESCP Permit Application Transcontinental Gas Pipe Line Company, LLC Attachment 1-1.1 Supporting Information

Project Component	Site	Site Location City	ZIP Code	County	Municipality	Total Project Area/Proje ct Site (Acre)	Total Disturbed Area (Acre)	Latitude / Longitude	U.S.G.S. 7.5 min. Topographic Quadrangle	Receiving Waters	Chapter 93, Designated Use Stream Classification	Chapter 93, Existing Use Stream Classification	Siltation Impaired
	Pipeline	-	-	Monroe	Ross, Chestnuthill, Tunkhannock		260.2	40.896796, -75.370606 (Southeast Terminus) 41.053413, -75.526178 (Northwest Terminus)	Blakeslee,	Lake Creek (Desig-HQ-CWF,MF), Princess Run – CWF,MF), McMichael Creek (Desig – HQ-CV (Desig –CWF,MF & Exist-HQ-CWF,MF), Sugar HQ-CWF,MF), Poplar Creek (Desig – CWF,M (Desig - HQ-CWF,MF), Mud Pond Run (Desig – CWF,MF)	VF, MF and EV, MF), Hollow Creek (Desig 1F, Existing – EV,MF) esig-HQ-CWF,MF & E	Pohopoco Creek –CWF,MF &Exist- and , Mud Run	No
Effort Loop	MLV-505LD86 Sugar Hollow Valve Yard	Effort	18330	Monroe	Chestnut Hill Township	358.70	9.6 (Included within above total)	40.96775, -75.42980	Pocono Pines, Brodheadsville, Saylorsburg	Sugar Hollow Creek	CWF, MF	HQ-CWF, MF	No
	CY-MO-001	Saylorsburg	18353	Monroe	Ross Township		50.1 (Included within above total)	40.89803, -75.36784		Lake Creek (Desig – HQ-CWF, MF) and Princess Run (Desig - CWF,MF) -			
							l		I				
Delaware River Regulator	-	Easton	18040	Northampto n	Lower Mt. Bethel	11.28	3.25	40.76220 -75.19653	Bangor, PA	Mud Run	CWF, MF	-	No
									l				
Mainline "A" Regulator	-	Washington Crossing	18977	Bucks	Lower Makefield	0.94	0.53	40.26807, -74.85712	Pennington, NJ- PA	Dyers Creek, Delaware River	WWF,MF (same for each)	-	No
									I				
Compressor Station 200	-	Frazer	19335	Chester	East Whiteland	20.28	3.16	40.04998, -75.58589	Malvern, PA	Valley Creek (East)	EV, MF	-	Yes
						T	I		I				
Compressor Station 515	-	White Haven	18661	Luzerne	Buck	931.98 (Included with Regional Energy Lateral)	24.83 (Included with Regional Energy Lateral)	41.17380, -75.67118	Pleasant View Summit, PA	Shades Creek, Stony Run	HQ-CWF, MF (same for each)	-	No

ATTACHMENT 1-1.2 DISCHARGE POINT SUMMARY TABLES

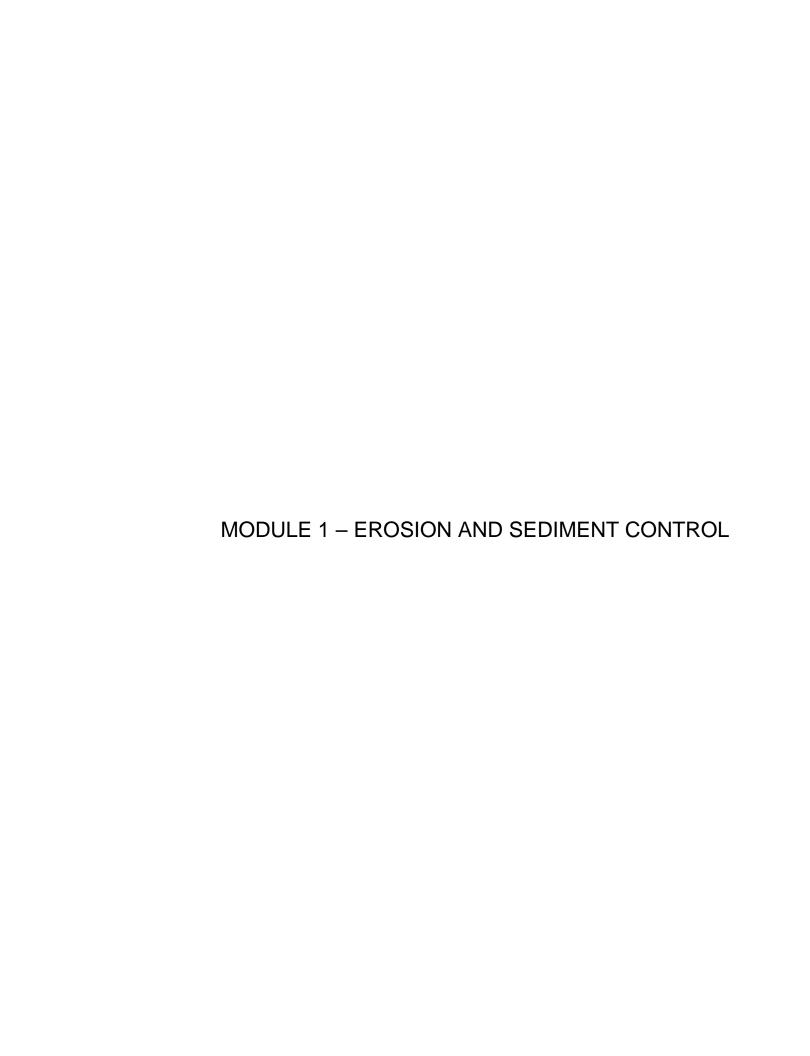
<u>Table 1 - During Construction Stormwater Discharge Information</u>

		Latitude	Longitude		Rece	eiving Waters			
Component	Discharge Point No.	(Degrees) (Degrees		Name of Receiving Waters	Ches. Bay?	Non-surface Waters	Ch. 93 Class	Impaired?	TMDL?
	POI-CFS-001	40.8962	-75.3697	Lake Creek		Х	HQ-CWF, MF	N	N
	POI-CFS-002	40.8961	-75.3693	Lake Creek		Х	HQ-CWF, MF	N	N
	POI-CFS-003	40.8961	-75.3688	Lake Creek		Х	HQ-CWF, MF	N	N
	POI-CFS-004	40.896	-75.3684	Lake Creek		Х	HQ-CWF, MF	N	N
	POI-CFS-005	40.8961	-75.3683	Lake Creek		Х	HQ-CWF, MF	N	N
Effort Loop - CY-MO-001	POI-CFS-006	40.8960	-75.3682	Lake Creek		Х	HQ-CWF, MF	N	N
	POI-CFS-007	40.8960	-75.3679	Lake Creek		Х	HQ-CWF, MF	N	N
	POI-CFS-008	40.8959	-75.3676	Lake Creek		Х	HQ-CWF, MF	N	N
	POI-CFS-009	40.8978	-75.3658	Lake Creek		Х	HQ-CWF, MF	N	N
	POI-CFS-010	40.8981	-75.3660	Lake Creek		Х	HQ-CWF, MF	N	N
	POI-CFS-011	40.8984	-75.3662	Lake Creek		Х	HQ-CWF, MF	N	N
	POI-LS-001	40.9692	-75.4296	Sugar Hollow Creek		Х	HQ-CWF, MF	N	N
Effort Loop - MLV505LD86	POI-DA-001	40.9681	-75.4277	Sugar Hollow Creek		Х	HQ-CWF, MF	N	N
ETIOT LOOP - IVILV 303LD86	POI-CFS-012	40.9684	-75.4277	Sugar Hollow Creek		Х	HQ-CWF, MF	N	N
	POI-CFS-013	40.9674	-75.4287	Sugar Hollow Creek		X	HQ-CWF, MF	N	N

<u>Table 2 - After Construction Stormwater Discharge Information</u>

	Disabausa	Latitda	l an aiteada		Rece	eiving Waters			
Component	Discharge Point No.	Latitude (Degrees)	Longitude (Degrees)	Name of Receiving Waters	Ches. Bay?	Non-surface Waters	Ch. 93 Class	Impaired?	TMDL?
MLV-515RA20	001	41.2532	-75.7589	Mill Creek	Х	Х	HQ-CWF,MF	N	N
MLV-515RA30	001	41.3042	-75.8460	Susquehanna River	Х	X	WWF, MF	N	N
Carverton Tie-in	001	41.3208	-75.8722	Trib. 28363 to Abrahams Creek	Х	х	CWF, MF	N	N
Lower Demunds REL Tie-in	001	41.3464	-75.9451	Trout Brook	Х	х	CWF, MF	N	N
Hildebrandt Tie- in/MLV-515RA40	001	41.3472	-75.9466	Trib. 63042 to Toby Creek	Х	Х	CWF, MF	N	N
	001	40.9681	-75.4277	Sugar Hollow Creek		Х	HQ-CWF, MF	N	N
MLV-505LD86	002	40.9663	-75.4281	Sugar Hollow Creek		X	HQ-CWF, MF	N	N
	003	40.9692	-75.4284	Sugar Hollow Creek		Х	HQ-CWF, MF	N	N
Compressor Station 200	001	40.0501	-75.5858	Valley Creek		х	EV, MF	N	N
Compressor Station 515	001	41.1747	-75.6724	Trib. 04285 to Shades Creek		Х	HQ-CWF, MF	N	N

ATTACHMENT 1-1.3 PERMIT MODULES



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COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF CLEAN WATER



NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES EROSION AND SEDIMENT CONTROL (E&S) MODULE 1

App	Applicant: Transcontinental Gas Pipe Line Company, LLC		Project Site Name	-	Regional Energy Access Expansion Project					
Sur	face Wat	er Name(s):	See Attachment 1.1-1	Surface Water Us	se(s):	See Attachment	1.1-1			
			E&S PLA	AN INFORMATION						
1.	Describ	e the existing	topographic features of the proje	ect site and the imme	ediate su	rrounding area.				
		maps shows	aps for project components a the topographical features o							
2.	Comple	te the followin	ng table for soils present at the pr	roject site. See Secti	ion 4.0 c	of the E&SC/SR PI	an Narrati	ves	1	
	Map Un Symbo		Map Unit Name	Acres	HSG	% of Disturbed Area	Depth (ft)	Hydric	Ī	
									İ	
ļ	Discuss	any soil limit:	ations and how the E&S Plan wa	as designed to addres	ss those	limitations				
	If Hydric If soils a 2) identi methods N/A	soils are pre are known to fy the extent s that will be u	sent, is a wetland determination be contaminated, 1) identify the of soil contamination on an E&S used to avoid or minimize disturb	attached to this mod pollutants exceedin S Plan Drawing that ance of the contamir	ule? ng Act 2 is attachated so		o N/pace prove, and 3) divided belo	A ided belov lescribe th w.	ne	
3.	propose	d alteration to	eristics of the earth disturbance of the project site.						e	
	See Sec	ction 5.0 of th	ne E&SC/SR Plan Narratives fo	or specific informati	on pert	aining to each pro	ject comp	oonent		
4.	Describ	e the volume	and rate of runoff from the projec	ct site and its upstrea	am watei	rshed area.	_		_	
	See Sec	ction 11.0 of	the E&SC/SR Plan Narratives f	or specific informa	tion per	taining to each pr	oject com	ponent		

5. Check boxes to indicate all BMPs that will be install	ed or implemente	ed, identify plan	numbers for the BMPs, and describe any deviations from the E&S Manual.
E&S BMPs	Plan No(s). Identified	Plan No(s). for O&M	Deviation(s) from E&S Manual
□ Rock Construction Entrance	See E&S Plans - Site Plans	See E&S Plans - Notes	
□ Rock Construction Entrance with Wash Rack	"	"	
☐ Rumble Pad			
☐ Wheel Wash			
☐ Open-top Culvert			
☐ Water Deflector			
□ Roadside Ditch			
☐ Ditch Relief Culvert			
☐ Turnout			
☐ Turbidity Barrier (Silt Curtain)			
□ Dewatering Work Areas			
Pumped Water Filter Bag			
Sump Pit Sump Pit			
☐ Waste Management			
Compost Filter Berm			
☐ Weighted Sediment Filter Tube			
□ Reinforced Silt Fence			
Super Silt Fence (Super Filter Fabric Fence)			

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	E&S BMPs	Plan No(s). Identified	Plan No(s). for O&M	Deviation(s) from E&S Manual
	Sediment Filter Log (Fiber Log)	"	"	
	Wood Chip Filter Berm			
	Straw Bale Barrier			
\boxtimes	Rock Filter			
	Vegetative Filter Strip			
	Inlet Filter Bag			
\boxtimes	Stone Inlet Protection			
\boxtimes	Runoff Conveyance (Channel)			
	Bench			
	Top-of-Slope Berm			
	Temporary Slope Pipe			
	Sediment Basin			
	Sediment Trap			
	Riprap Apron			
	Flow Transition Mat			
	Stilling Basin (Plunge Pool)			
	Stilling Well			
	Energy Dissipater			
	Drop Structure			
	Earthen Level Spreader			
	Structural Level Spreader			
	Surface Roughening			
\boxtimes	Vegetative Stabilization			
\boxtimes	Erosion Control Blanket			
	Soil Binders			
	Sodding			
	Cellular Confinement Systems			
	Alternative:			
	Alternative:			

Table 1 – For PAG-01 applicants, complete the requested information for each selected E&S BMP, where applicable.

Site Access BMPs	ı		T				T	T		
BMP Name	No.	Length (ft)	Width (ft)	% Slope	Spacing (ft)	Length of Upslope Drainage (ft)	Culvert Diameter (in)	Soil Type in Ditch		E&S Manual Figure/Detail No.
Rock Construction Entrance (RCE)										
RCE with Wash Rack										
Temporary and Permanent Access Roads – Crowned Roadway										
Temporary and Permanent Access Roads – Insloped Roadway										
Waterbar										
Broad-based Dip										
Open-top Culvert										
Water Deflector										
Roadside Ditch										
Ditch Relief Culvert										
Sediment Barriers / Filters										
BMP Name	DA (a	c) Dian	neter (in)	Storage Capacity (cf)	Trap Heig (in)	ht % Slope	Slope I Above B	_ength arrier (ft)	Barrier Height (in)	E&S Manual Figure/Detail No.
Compost Sock Sediment Trap										
Compost Filter Sock										
Compost Filter Berm										
Silt Fence (Filter Fabric Fence)										
Super Silt Fence										
Sediment Filter Log										
Weighted Sediment Filter Tube										
Straw Bale Barrier										
Wood Chip Filter Berm										
Toe-of-Slope Berm										

Table 1 – For PAG-01 applicants, complete the requested information for each selected E&S BMP, where applicable.

Runoff Conveyand	e BMPs			<u> </u>												
BMP Name	Temporary	, Desig Storm		ac) Multipl	ier Q	r (cfs)	Q (cfs)		ning's n	Va (fp:		V (fps)	D (f	t) d (ft	Flow Depti	th Figure/Detail
Vegetated Channel																
Sodded Channel																
Riprap Channel																
Energy Reduction	BMPs															·
BMP Name	Downstrea to Drainage			nstream % Slope	D	A (ac)	Disch (cf			hole th (ft)		Inflow Diamet			et Pipe eter (in)	E&S Manual Figure/Detail No.
Level Spreader																
Drop Structure																
Stilling Basins / W	ells		•		•		•									
BMP Name	Pipe Diameter (ir	Discha	rge (cfs)	Well Diameter (in)		Depth of Well Below Invert (ft)				Median Riprap Size (in)		Distance from Discharge Pipe to Basin Center (ft)		E&S Manual Figure/Detail No.		
Stilling Basin																
Stilling Well																
Other BMPs																
BMP Name	DA (ac)	Pipe Diameter (in)	Berm Height (in)	Length (ft)	% Slope	Vertic Spac (ft)	ing C	hannel epth (ft)		orap ize		Riprap hickness (in)		Initial idth (ft)	Termin Width (
Temporary Slope Pipe																
Bench																
Rock Filter																
Riprap Apron										•						

For selected BMPs not identified in Table 1, report the name of the BMP and the Figure or Detail No. from the E&S Manual that will be used for design and implementation (PAG-01 only).

	BMP Name	E&S Manual Figure/Detail No.	BMP Name	E&S Manual Figure/Detail No.						
6. All applicable Standard E&S Worksheets from Appendix B of the E&S Manual have been completed and are attached.										
7	7 Other worksheets or calculations equivalent to Appendix B of the F&S Manual have been completed and are attached									

- Other worksheets or calculations equivalent to Appendix B of the E&S Manual have been completed and are attached.
- Identify the E&S Plan Drawing number(s) that describes the sequence of BMP installation and removal in relation to the scheduling of earth disturbance activities, prior to, during and after earth disturbance activities that ensure the proper functioning of all BMPs.

Regional Energy Lateral - Sheet 68 of 91

Effort Loop - Sheet 36 of 53

Compressor Station 200 - Sheet 4 of 7

Compressor Station 515 - Sheet 6 of 10

Delaware River Regulator - Sheet 4 of 6

Mainline A Regulator - Sheet 4 of 6

- 9. Supporting E&S calculations have been completed and are available upon request (PAG-01 only).
- 10. Supporting E&S calculations are attached to the NOI/application.
- 11. Plan drawings consist of standard Figures/Construction Details in E&S Manual (PAG-01 only).
- 12. Plan drawings have been developed for the project and are attached to the NOI/application.
- 13. BMPs will be inspected on a weekly basis and after measurable storm events (i.e., at least 0.25 inch).
- 14. Identify the following information relating to temporary stabilization measures on an E&S Plan Drawing and identify the Drawing No. below: 1) vegetative species, 2) % pure live seed, 3) seed application rate, 4) fertilizer type, 5) fertilizer application rate, 6) mulch type, 7) mulching rate, and 8) liming rate.

E&S Plan Drawing No(s).: Regional Energy Lateral - Sheet 70 of 91

Effort Loop - Sheet 38 of 53

Compressor Station 200 - Sheet 5 of 7 Compressor Station 515 - Sheet 7 of 10 Delaware River Regulator - Sheet 5 of 6 Mainline A Regulator - Sheet 5 of 6

15. Identify the following information relating to permanent stabilization measures on an E&S Plan Drawing and identify the Drawing No. below: 1) vegetative species, 2) % pure live seed, 3) seed application rate, 4) fertilizer type, 5) fertilizer application rate, 6) mulch type, 7) mulching rate, 8) liming rate, 9) anchor material, 10) anchoring method, 11) rate of anchor material application, 12) topsoil placement depth, and 13) seeding season dates.

E&S Plan Drawing No(s).: Regional Energy Lateral - Sheet 70 of 91

Effort Loop - Sheet 38 of 53

Compressor Station 200 - Sheet 5 of 7 Compressor Station 515 - Sheet 7 of 10 Delaware River Regulator - Sheet 5 of 6 Mainline A Regulator - Sheet 5 of 6

16. Describe the procedures that will be taken to ensure that recycling or disposal of materials associated with or from the project site will be conducted properly.

The restoration of the pipeline right-of-way will require the removal of the temporary materials. The temporary materials include, but may not be limited to, stone surfaces and associated geotextiles. The contractors are required to dispose of the materials at suitable disposal or recycling sites and in compliance with local, state and federal regulations.

Contractors are required to inventory and manage their construction site materials. The goal is to be aware of the materials on-site, ensure they are properly maintained, used, and disposed of, and to make sure the materials are not exposed to stormwater. The following materials or substances are expected to be present on-site during construction (Note: this list is not an all-inclusive list and the materials management plan can be modified to address additional materials used on-site):

- Acids
- Detergents
- Fertilizers (nitrogen/phosphorus)
- Hydroseeding mixtures
- Petroleum based products
- Sanitary wastes
- Soil stabilization additives
- Solder
- Solvents

These materials must be stored as appropriate and shall not contact storm or non-stormwater discharges. Contractor shall provide a weatherproof container to store chemicals or erodible substances that must be kept on the site. Contractor is responsible for reading, maintaining, and making employees and subcontractors aware of Safety Data Sheets (SDSs).

17. Identify the presence of any naturally occurring geologic formations or soil conditions that may have the potential to cause pollution during earth disturbance activities. If such formations or conditions exist, identify BMPs that will be implemented to avoid or minimize potential pollution.

See Section 4.2 of the E&SC/SR Plan Narratives for specific information pertaining to each project component.

18. Identify whether the potential exists for thermal impacts to surface waters from the earth disturbance activity. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts.

See Section 8.0 of the E&SC/SR Plan Narratives for specific information pertaining to each project component.

19. 🛛 The E&S	19. 🖂 The E&S Plan has been planned, designed, and will be implemented to be consistent with the PCSM Plan.									
• •	20. If applicable, identify existing and proposed riparian forest buffers on E&S and PCSM Plan Drawings and identify the Drawing No(s) below (select N/A if not applicable).									
E&S Plan Dra	awing No(s):	See E&S Plans - Site Plans	□ N/A							
PCSM Plan D	Drawing No(s):	See PCSM Plans - Site Plan								
		E&S PL	AN DEVELOPER							
☐ I am trained a	nd experienced	in E&S control methods.		nsed professional.						
Name:	Patrick Wozi	nski, P.E.	Title:	Project Engineer						
Company:	BAI Group, L	LC	Phone No.:	(814) 238-2060						
Address:	366 Walker D	Prive; Suite 300	Email:	pwozinski@baigroupllc.com						
City, State, ZIP:	State College	e, PA-16801	License No.:	PE078243						
License Type:	Professional	Engineer	Exp. Date:	09/30/2023						
de	the		_	3/4/22						
E&S	Plan Develope	er Signature		Date						

MODULE 2 – POST CONSTRUCTION STORMWATER MANAGEMENT SITES

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF CLEAN WATER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) MODULE 2

Applicant:	Transcor Company	ntinental Gas Pipe Line y, LLC	Project Site Name:	Regional En Project - ML	Regional Energy Access Expansion Project - MLV-515RA20				
Surface Wat	er Name(s)	: Mill Creek	Surface Water Use(s)		WF,MF – Existing MF - Designated				
		PCSM PLAI	NINFORMATION						
1. Identify	all structura	and non-structural PCSM BMPs that	t have been selected a	and provide th	ne information red	quested.			
Discharge Point(s)	BMP ID	BMP Name	BMP Manual	Latitude	Longitude	DA Treated (ac)			
001	1	Constructed Filter	BMP 6.4.7	N41° 15' 11.16"	W75° 45' 31.68"	0.37			
001	2	Infiltration Berm & Retentive Grading	g BMP 6.4.10	N41° 15' 11.16	W75° 45' 31.68"	0.40			
Undetained	Areas:	0.16 acre(s)							
☐ The Proj	ect Qualifie	s as a Site Restoration Project (25 Pa	a. Code §102.8(n))						
2 Describe	the secu	ence of PCSM RMP implementation	on in relation to earth	disturbance	activities and a	schedule of			

inspections for the critical stages of PCSM BMP installation.

	See Section 6.1 of the PCSM Plan Narratives for specific sequences and critical stage inspections for each PCSM BMP area.
3.	⊠ Plan drawings have been developed for the project and will be available on-site.
4.	
5.	Recycling and proper disposal of materials associated with PCSM BMPs are addressed as part of long-term operation and maintenance of the PCSM BMPs.
6.	Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM BMPs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts.
	See Section 4.0 of the PCSM Plan Narrative.
7.	Identify whether the potential exists for thermal impacts to surface waters from post-construction stormwater. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts.
	Thermal impacts to surface waters are not anticipated. Most of the stormwater will be routed through the stormwater BMP designed to retain and infiltrate the first surge of water from the site. The first surge of water will be the warmest water for the duration of the storm event and will quickly cool as the storm event progresses. The BMPs are designed to capture and infiltrate this warmest surge of stormwater. Based on routing calculations, stormwater is retained in the BMPs for a period of 12 hours before being discharged during a 100-year/24-hour storm event. This retention period is longer for less intense storms. Therefore, as a result of these measures, no significant thermal impact to the receiving waters is anticipated.
8.	☐ The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.
9.	

				STORM	WATER AN	ALYSIS – RUI	NOFF V	OLUME			
Surface Wa	ter Name:	Mill Cree	ek, Trib 63014 & 6	3015 to Mill (Creek			Discha	rge Point(s):	001	
1.	design stand	ard is base	ed on volume ma	nagement red	quirements in	an Act 167 Pla	n approv	ed by DEP withi	n the past five	years.	
2. 🛛 The	design stand	ard is base	ed on managing	the net chang	je for storms ι	up to and includ	ling the 2	2-year/24-hour st	orm.		
3.	Iternative de	sign stand	ard is being used	l. ***Act 167	Plan Greater t	than 5 years old	<u>d</u>				
4. 🛛 A pri	4. 🛛 A printout of DEP's PCSM Spreadsheet – Volume Worksheet is attached.										
5. 2-Year/2	24-Hour Storn	n Event:	in	ches Sc	ource of precip	oitation data:					
6. Stormwa	ater Runoff V	olume, Pre	e-Construction Co	onditions:		CF [☐ Calcu	lations attached			
7. Stormwa	ater Runoff V	olume, Po	st-Construction C	Conditions:		CF [] Calcu	lations attached			
8. Net Cha	nge (Post-Co	nstruction	– Pre-Constructi	ion Volumes):		CF					
9. Identify	all selected s	tructural P	CSM BMPs and	provide the in	formation req	uested. [☐ Calcu	lations attached			
DP No.	BMP ID	Series	Vol. Routed to BMP (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)
								Tota	I Infiltration &	ET Credits (CF):	

Non-Structural BMP Volume Credits (CF) (Attach Calculations):

Managed Release Credits (CF) (Attach MRC Design Summary):

Volume Required to Reduce/Manage (CF):

Total Credits (CF):

See Attachment 3 of PCSM Plan Narrative for Infiltration Information

	INFILTRATION INFORMATION
BN	IP ID: 1 ☐ Soil/geologic test results are attached.
1.	No. of infiltration tests completed: N/A
2.	Method(s) used for infiltration testing: N/A
3.	Test Pit Identifiers (from PCSM Plan Drawings): N/A
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1
6.	Infiltration rate used for design: in/hr
7.	Separation distance between the BMP bottom and bedrock: feet
8.	Separation distance between the BMP bottom and seasonal high-water table: feet
9.	Comments:
BN	1P ID: 2 ☑ Soil/geologic test results are attached.
1.	No. of infiltration tests completed: 2
2.	Method(s) used for infiltration testing: Double ring infiltrometer
3.	Test Pit Identifiers (from PCSM Plan Drawings): BH 3
4.	Avg Infiltration Rate: 0.63 in/hr 5. FOS: 2 : 1
6.	Infiltration Rate Used for Design: 0.315 in/hr
7.	Separation distance between the BMP bottom and bedrock: 2 feet
8.	Separation distance between the BMP bottom and seasonal high-water table: >2 feet
9.	Comments:
BN	IP ID: ☐ Soil/geologic test results are attached.
1.	No. of infiltration tests completed:
2.	Method(s) used for infiltration testing:
3.	Test Pit Identifiers (from PCSM Plan Drawings):
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1
6.	Infiltration Rate Used for Design: in/hr
7.	Separation distance between the BMP bottom and bedrock: feet
8.	Separation distance between the BMP bottom and seasonal high-water table: feet
9.	Comments:

STORMWATER ANALYSIS – PEAK RATE										
Surface Water Name: Mill Creek Discharge Point(s): 001										
1. The design sta	. The design standard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.								ears.	
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. ***Act 167 Plan Greater than 5 years old										
4. A printout of DEP's PCSM Spreadsheet – Rate Worksheet is attached.										
5. Alternative rate calculations are attached.										
6. Identify precipitation amounts. Source of precipitation data: NOAA										
2-Year/24-Hour Storm: 2.95 10-Year/24-Hour Storm 4.30										
50-Year/24-Hour S	Storm: 6.26	6		100-Ye	ar/24-Hour \$	Storm	7.39			
7. Report peak discharge rates, pre- and post-construction (without BMPs), based on a time of concentration analysis.										
Design Storm Pre-Construction Peak Rate (cfs)			Post-Con	struction Po	tion Peak Rate Difference (cfs)			efs)		
2-Year/24-Hour		0.84			1.14			0.30		
10-Year/24-Hour	1.70			2.09			0.39			
50-Year/24-Hour	3.04			3.52			0.48			
100-Year/24-Hour	/24-Hour 3.85			4.36			0.51			
8. Identify all BMPs used to mitigate peak rate differences and provide the requested information.										
BMP ID			Inflow to	BMP (cfs) O			outflow from BMP (cfs)			
BWF ID		2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr	
1		0.94	1.68	2.80	3.44	0.94	1.68	2.80	3.44	
2		0.94	1.68	2.80	3.44	0.07	0.78	1.29	1.85	
Report peak rates for pre-construction and post-construction with BMPs and identify the differences.										
Design Storm	Pre-Construction Peak Rate (cfs)		Post-Construction Peak Rate (with BMPs) (cfs)			Difference (cfs)				
2-Year/24-Hour	0.84				0.31			-0.53		
10-Year/24-Hour	ear/24-Hour 1.70			1.09 -0.61						
50-Year/24-Hour	3.04 2.25						-0.79			
100-Year/24-Hour	3.85			<u></u>	3.21		-0.64			

STORMWATER ANALYSIS – WATER QUALITY								
☑ A printout of DEP's PCSM Spreadsheet – Quality Worksheet is attached for all surface waters receiving discharges.								
LONG-TERM O&M								
Describe the long-term operation and maintenance (O&M) requirements for each selected PCSM BMP.								
BMP ID	O&M Requirements							
	See Section 9.0 of the PCSM Plan Narrative for O&M requirements.							
		LAN DEVELOPER						
	ned and experienced in PCSM methods.		sed professional.					
Name:	Patrick A. Wozinski	Title:	Project Engineer					
Company:	BAI Group, LLC	Phone No.:	(814) 238-2060					
Address:	366 Walker Drive, Suite 300	— Email:	pwozinski@baigroupllc.com					
City, State, Z	ZIP: State College, PA-16801	License No.:	PE078243					
License Type	e: Professional Engineer	Exp. Date	09/30/2023					
	PCSM Plan Developer Signature	03/01/2022 Date						
	PCSM Plan Developer Signature	-						

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pennsylvania

DEPARTMENT OF ENVIRONMENTAL
PROTECTION

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF CLEAN WATER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) MODULE 2

Applicant:	Transcor Company	ntinental Gas Pipe Line y, LLC	Project Site Name: Regional Energy Access Expansion Project - MLV-515RA30						
Surface Wat	er Name(s)	: Susquehanna River	Surface Water Use(s): WWF, MF						
		PCSM I	PLAN INFORMATION						
1. Identify all structural and non-structural PCSM BMPs that have been selected and provide the information requested.									
Discharge Point(s)	BMP ID	BMP Name	BMP Manual	Latitude	Longitude	DA Treated (ac)			
001	1	Infiltration Berm	BMP 6.4.10	N41° 18' 15.48"	W75° 50' 47.04	0.47			
Undetained	Areas:	0.41 acre(s)							
☐ The Project Qualifies as a Site Restoration Project (25 Pa. Code §102.8(n))									
2. Describe the sequence of PCSM BMP implementation in relation to earth disturbance activities and a schedule of inspections for the critical stages of PCSM BMP installation.									
See Section 6.2 of the PCSM Plan Narratives for specific sequences and critical stage inspections for each PCSM BMP area.									

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- 3. ☐ Plan drawings have been developed for the project and will be available on-site. 4. Plan drawings have been developed for the project and are attached to the NOI/application. Recycling and proper disposal of materials associated with PCSM BMPs are addressed as part of long-term operation 5. and maintenance of the PCSM BMPs. Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM BMPs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts. See Section 4.0 of the PCSM Plan Narrative. 7. Identify whether the potential exists for thermal impacts to surface waters from post-construction stormwater. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts. Thermal impacts to surface waters are not anticipated. Most of the stormwater will be routed through the stormwater BMP designed to retain and infiltrate the first surge of water from the site. The first surge of water will be the warmest water for the duration of the storm event and will quickly cool as the storm event progresses. The BMPs are designed to capture and infiltrate this warmest surge of stormwater. Based on routing calculations, stormwater is retained in the BMPs for a period of 12 hours before being discharged during a 100-year/24-hour storm event. This retention period is longer for less intense storms. Therefore, as a result of these measures, no
- 8. The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.
- A pre-development site characterization has been performed.

significant thermal impact to the receiving waters is anticipated.

STORMWATER ANALYSIS – RUNOFF VOLUME											
Surface Wat	er Name:	Susquel	hanna River					Discha	rge Point(s):	001	
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. ***Act 167 Plan Greater than 5 years old											
4. A printout of DEP's PCSM Spreadsheet – Volume Worksheet is attached.											
5. 2-Year/24-Hour Storm Event: inches Source of precipitation data:											
6. Stormwater Runoff Volume, Pre-Construction Conditions: CF Calculations attached											
7. Stormwa	7. Stormwater Runoff Volume, Post-Construction Conditions: CF Calculations attached										
8. Net Cha	nge (Post-Co	nstruction	– Pre-Construct	ion Volumes)	•	CF					
9. Identify a	all selected st	tructural P	CSM BMPs and	provide the in	formation req	uested.	☐ Calcu	llations attached			
DP No.	BMP ID	Series	Vol. Routed to BMP (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)
								Tota	I Infiltration &	ET Credits (CF):	
						Non-Stru	ctural Bl	MP Volume Cree	dits (CF) (Attac	h Calculations):	

Managed Release Credits (CF) (Attach MRC Design Summary):

Volume Required to Reduce/Manage (CF):

Total Credits (CF):

	INFILTRATION INFORMATION
BN	IP ID: 1 ⊠ Soil/geologic test results are attached.
1.	No. of infiltration tests completed: 4
2.	Method(s) used for infiltration testing: Double Ring infiltrometer
3.	Test Pit Identifiers (from PCSM Plan Drawings): TP 3, TP 4
4.	Avg Infiltration Rate: 0.94 in/hr 5. FOS: 2.5 : 1
6.	Infiltration rate used for design: 0.38 in/hr
7.	Separation distance between the BMP bottom and bedrock: >2 feet
8.	Separation distance between the BMP bottom and seasonal high-water table: >2 feet
9.	Comments:
BN	IP ID: □ Soil/geologic test results are attached.
1.	No. of infiltration tests completed:
2.	Method(s) used for infiltration testing:
3.	Test Pit Identifiers (from PCSM Plan Drawings):
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1
6.	Infiltration Rate Used for Design: in/hr
7.	Separation distance between the BMP bottom and bedrock: feet
8.	Separation distance between the BMP bottom and seasonal high-water table: feet
9.	Comments:
BN	IP ID: ☐ Soil/geologic test results are attached.
1.	No. of infiltration tests completed:
2.	Method(s) used for infiltration testing:
3.	Test Pit Identifiers (from PCSM Plan Drawings):
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1
6.	Infiltration Rate Used for Design: in/hr
7.	Separation distance between the BMP bottom and bedrock: feet
8.	Separation distance between the BMP bottom and seasonal high-water table: feet
9.	Comments:

STORMWATER ANALYSIS – PEAK RATE										
Surface Water Name:	Susqueha	anna River			Disc	charge Poi	nt(s): 00)1		
1. The design standard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.									ears.	
2. X The design sta	2. X The design standard is based on managing the net change for 2-, 10-, 50-, and 100-year/24-hour storms.									
3.	design standa	ard is being	used. ***Ac	t 167 Plan G	reater than t	years old				
4. A printout of D	EP's PCSM S	Spreadsheet	– Rate Wor	ksheet is atta	ached.					
5. Alternative rate	e calculations	are attached	d.							
6. Identify precipitation	on amounts.	Sourc	e of precipita	ation data:	NOAA					
2-Year/24-Hour St	orm: 2.5	7		10-Yea	ır/24-Hour S	torm	3.73			
50-Year/24-Hour S	Storm: 5.39	9		100-Ye	ar/24-Hour	Storm	6.34			
7. Report peak disch	arge rates, pr	e- and post-	construction	(without BM	IPs), based	on a time of	concentra	ation analysis	S.	
Design Storm	Pre-Cons	truction Pe (cfs)	ak Rate	Post-Con	struction P (cfs)	eak Rate	Difference (cfs)			
2-Year/24-Hour		0.46		0.70			0.24			
10-Year/24-Hour		1.01		1.35			0.34			
50-Year/24-Hour		1.93		2.35			0.42			
100-Year/24-Hour		2.48			2.93		0.45			
8. Identify all BMPs u	used to mitigat	te peak rate	differences	and provide	the requeste	ed informati	on.			
BMP ID			Inflow to	BMP (cfs)		0	utflow fro	m BMP (cfs	5)	
טו וואוט		2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr	
1		0.99	1.85	3.16	3.92	0.0	0.0	0.0	0.0	
9. Report peak rates	for pre-constr	ruction and p	oost-constru	ction with BN	/IPs and ide	ntify the diffe	erences.			
Design Storm Pre-Construction Peak Rate (cfs) Post-Construction (with BMP)							D	ifference (c	fs)	
2-Year/24-Hour		0.46			0.00		-0.46			
10-Year/24-Hour		1.01			0.00			-1.01		
50-Year/24-Hour		1.93			0.00			-1.93		
100-Vear/24-Hour	100-Vear/24-Hour 2.48					0.00			-2 48	

	STORMWATER AN	ALYSIS – WATER O	QUALITY							
A printou	t of DEP's PCSM Spreadsheet – Quality Work	sheet is attached for a	Ill surface waters receiving discharges.							
	LON	G-TERM O&M								
Describe the	Describe the long-term operation and maintenance (O&M) requirements for each selected PCSM BMP. O&M Requirements									
BMP ID	·									
	See Section 9.0 of the PCSM Plan Narrativ	e for O&M requireme	ents.							
	DOOM BY	AN DEVELOPED								
N 1 1 '-		LAN DEVELOPER	and another clausel							
	ned and experienced in PCSM methods.		sed professional.							
Name:	Patrick A. Wozinski	Title:	Project Engineer							
Company:	BAI Group, LLC	Phone No.:	(814) 238-2060							
Address:	366 Walker Drive, Suite 300	— Email:	pwozinski@baigroupllc.com							
City, State, ZIP: State College, PA-16801		License No.:	PE078243							
License Type	e: Professional Engineer	Exp. Date	09/30/2023							
	PCSM Plan Developer Signature	03/01/2022 Date								
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COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF CLEAN WATER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) MODULE 2

Applicant:	Transco Compan	ontinental Gas Pipe Line ny, LLC	Project Site Name:		gional Energy Access Expansion oject - Carverton Tie-in			
Surface Wat	er Name(s	Trib 28363 to Abrahams Creek	Surface Water Use(s	S): CWF, MF				
		PCSM PLAN	INFORMATION					
1. Identify a	all structur	al and non-structural PCSM BMPs that	have been selected	and provide th	e information red	quested.		
Discharge Point(s)	BMP ID	BMP Name	BMP Manual	Latitude	Longitude	DA Treated (ac)		
001	1	Infiltration Berm & Retentive Grading	6.4.10	N41° 19' 14.52"	W75° 52' 20.28"	0.34		
Undetained	Areas:	0.49 acre(s)						
☐ The Proj	ect Qualifi	es as a Site Restoration Project (25 Pa	. Code §102.8(n))					
2. Describe	the sequ	uence of PCSM BMP implementation	n in relation to ear	th disturbance	activities and a	a schedule of		

inspections for the critical stages of PCSM BMP installation.

	See Section 6.0 of the PCSM Plan Narratives for specific sequences and critical stage inspections for each PCSM BMP area.
3.	☑ Plan drawings have been developed for the project and will be available on-site.
4.	
5.	Recycling and proper disposal of materials associated with PCSM BMPs are addressed as part of long-term operation and maintenance of the PCSM BMPs.
6.	Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM BMPs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts.
7.	Identify whether the potential exists for thermal impacts to surface waters from post-construction stormwater. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts. Thermal impacts to surface waters are not anticipated. Most of the stormwater will be routed through the stormwater BMP designed to retain and infiltrate the first surge of water from the site. The first surge of water will be the warmest water for the duration of the storm event and will quickly cool as the storm event progresses. The BMPs are designed to capture and infiltrate this warmest surge of stormwater. Based on routing calculations, stormwater is retained in the BMPs for a period of 12 hours before being discharged during a 100-year/24-hour storm event. This retention period is longer for less intense storms. Therefore, as a result of these measures, no significant thermal impact to the receiving waters is anticipated.
8.	☐ The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.
9.	□ A pre-development site characterization has been performed.

STORMWATER ANALYSIS – RUNOFF VOLUME												
Surface Wat	er Name:	Trib 283	63 to Abrahams	Creek				Discha	rge Point(s):	001		
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	2. 🔲 The design standard is based on managing the net change for storms up to and including the 2-year/24-hour storm.											
3.	3. 🔲 An alternative design standard is being used. ***Act 167 Plan is greater than 5 years old.											
4. 🛛 A pri	ntout of DEP	's PCSM S	Spreadsheet – Vo	olume Worksl	heet is attache	ed.						
5. 2-Year/2	4-Hour Storn	n Event:	in	ches So	ource of precip	pitation data:						
6. Stormwa	ater Runoff Vo	olume, Pre	e-Construction Co	onditions:		CF [☐ Calcu	ulations attached				
7. Stormwa	ater Runoff Vo	olume, Po	st-Construction C	Conditions:		CF [☐ Calcu	ulations attached				
8. Net Cha	nge (Post-Co	nstruction	Pre-Construct	ion Volumes)	:	CF						
9. Identify a	all selected s	tructural P	CSM BMPs and	provide the ir	nformation req	uested. [☐ Calcu	ulations attached				
DP No.	BMP ID	Series	Vol. Routed to BMP (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)	
								Tota	al Infiltration &	ET Credits (CF):		

Managed Release Credits (CF) (Attach MRC Design Summary):

Volume Required to Reduce/Manage (CF):

	INFILTRATION INFORMATION								
BN	IP ID: 1								
1.	No. of infiltration tests completed: 4								
2.	Method(s) used for infiltration testing: Double ring infiltrometer								
3.	Test Pit Identifiers (from PCSM Plan Drawings): TP 1, TP 2, TP 5								
4.	Avg Infiltration Rate: 6.55 in/hr 5. FOS: 8.7 :1								
6.	Infiltration rate used for design: 0.75 in/hr								
7.	Separation distance between the BMP bottom and bedrock: 2 feet								
8.	Separation distance between the BMP bottom and seasonal high-water table: >2 feet								
9.	Comments:								
BN	IP ID: □ Soil/geologic test results are attached.								
1.	No. of infiltration tests completed:								
2.	Method(s) used for infiltration testing:								
3.	Test Pit Identifiers (from PCSM Plan Drawings):								
4.	Avg Infiltration Rate: in/hr 5. FOS: :1								
6.	Infiltration Rate Used for Design: in/hr								
7.	Separation distance between the BMP bottom and bedrock: feet								
8.	Separation distance between the BMP bottom and seasonal high-water table: feet								
9.	Comments:								
BN	✓ Soil/geologic test results are attached.								
1.	No. of infiltration tests completed:								
2.	Method(s) used for infiltration testing:								
3.	Test Pit Identifiers (from PCSM Plan Drawings):								
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1								
6.	Infiltration Rate Used for Design: in/hr								
7.	Separation distance between the BMP bottom and bedrock: feet								
8.	Separation distance between the BMP bottom and seasonal high-water table: feet								
9.	Comments:								

STORMWATER ANALYSIS – PEAK RATE											
Surface Water Name:	Surface Water Name: Trib 28363 to Abrahams Creek Discharge Point(s): 001										
1. The design standard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.									ears.		
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 standa	ard is being	used. ***Ac	t 167 Plan is	greater than	n 5 years old	<u>d.</u>				
4. 🛛 A printout of D	EP's PCSM S	preadsheet	– Rate Wor	ksheet is atta	ached.						
5. Alternative rate	<u> </u>										
6. Identify precipitation	on amounts.	Sourc	e of precipita	ation data:	NOAA						
2-Year/24-Hour St	orm: 2.6	1		10-Yea	ır/24-Hour S	torm	3.79				
50-Year/24-Hour S	Storm: 5.48	3		100-Ye	ar/24-Hour \$	Storm	6.44				
7. Report peak disch	arge rates, pr	e- and post-	construction	(without BM	IPs), based	on a time of	concentra	tion analysi	S.		
Design Storm	Pre-Cons	truction Pe (cfs)	ak Rate	Post-Con	struction P	eak Rate	Difference (cfs)				
2-Year/24-Hour		0.69		0.99			-0.30				
10-Year/24-Hour		1.27		1.64			-0.37				
50-Year/24-Hour		2.17			2.56		-0.39				
100-Year/24-Hour		2.70			3.09	-0.39					
8. Identify all BMPs u	used to mitigat	e peak rate	differences	and provide	the requeste	ed information	on.				
BMP ID			Inflow to	BMP (cfs)		0	utflow fro	m BMP (cf	s)		
DINIF ID		2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr		
1		0.99	1.64	2.56	3.09	0.00	0.00	1.47	2.50		
9. Report peak rates	for pre-constr	uction and p	ost-constru	ction with BN	/IPs and ider	ntify the diffe	erences.				
Design Storm	Post-Construction Peak Rate (with BMPs) (cfs)			Difference (cfs)							
2-Year/24-Hour		0.69		0.00				-0.69			
10-Year/24-Hour		1.27			0.00		-1.27				
50-Year/24-Hour		2.17			1.47			-0.70			
100-Year/24-Hour	100-Year/24-Hour 2.70					2.50			-0.20		

	STORMWATER AN	ALYSIS – WATER O	QUALITY							
A printou	t of DEP's PCSM Spreadsheet – Quality Work	sheet is attached for a	Ill surface waters receiving discharges.							
	LON	G-TERM O&M								
Describe the	Describe the long-term operation and maintenance (O&M) requirements for each selected PCSM BMP. O&M Requirements									
BMP ID	·									
	See Section 9.0 of the PCSM Plan Narrativ	e for O&M requireme	ents.							
	DOOM BY	AN DEVELOPED								
N 1 1 '-		LAN DEVELOPER	and another clausel							
	ned and experienced in PCSM methods.		sed professional.							
Name:	Patrick A. Wozinski	Title:	Project Engineer							
Company:	BAI Group, LLC	Phone No.:	(814) 238-2060							
Address:	366 Walker Drive, Suite 300	— Email:	pwozinski@baigroupllc.com							
City, State, ZIP: State College, PA-16801		License No.:	PE078243							
License Type	e: Professional Engineer	Exp. Date	09/30/2023							
	PCSM Plan Developer Signature	03/01/2022 Date								
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pennsylvania

DEPARTMENT OF ENVIRONMENTAL
PROTECTION

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF CLEAN WATER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) MODULE 2

Applicant:	Transcon Company	ntinental Gas Pipe Line /, LLC	Project Site Name:		ergy Access Ex wer Demunds R	
Surface Wate	er Name(s):	Trout Brook	Surface Water Use(s	CWF, MF		
		PCSM	PLAN INFORMATION			
1. Identify a	all structura	I and non-structural PCSM BMP	s that have been selected	and provide th	e information red	quested.
Discharge Point(s)	BMP ID	BMP Name	BMP Manual	Latitude	Longitude	DA Treated (ac)
001	1	Infiltration Bed	BMP 6.4.3	N41° 20' 47.04"	W75° 56' 43.08"	0.13
						_
Undetained	Areas:	0.03 acre(s)				
☐ The Proj	ect Qualifie	s as a Site Restoration Project ((25 Pa. Code §102.8(n))			
		ence of PCSM BMP impleme critical stages of PCSM BMP ins		h disturbance	activities and a	schedule of
See Sec BMP are		the PCSM Plan Narratives for	specific sequences and	critical stage	inspections for	each PCSM

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3.	\boxtimes	Plan drawings have been developed for the project and will be available on-site.
4.	\boxtimes	Plan drawings have been developed for the project and are attached to the NOI/application.

- 5. Recycling and proper disposal of materials associated with PCSM BMPs are addressed as part of long-term operation and maintenance of the PCSM BMPs.
- 6. Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM BMPs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts.

See Section 4.0 of the PCSM Plan Narrative.

7. Identify whether the potential exists for thermal impacts to surface waters from post-construction stormwater. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts.

Thermal impacts to surface waters are not anticipated. Most of the stormwater will be routed through the stormwater BMP designed to retain and infiltrate the first surge of water from the site. The first surge of water will be the warmest water for the duration of the storm event and will quickly cool as the storm event progresses. The BMPs are designed to capture and infiltrate this warmest surge of stormwater. Based on routing calculations, stormwater is retained in the BMPs for a period of 12 hours before being discharged during a 100-year/24-hour storm event. This retention period is longer for less intense storms. Therefore, as a result of these measures, no significant thermal impact to the receiving waters is anticipated.

- 8.

 The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.
- 9. A pre-development site characterization has been performed.

STORMWATER ANALYSIS – RUNOFF VOLUME												
Surface Wat	er Name:	Trout Br	ook					Discha	rge Point(s):	001		
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. X The	2. 🔲 The design standard is based on managing the net change for storms up to and including the 2-year/24-hour storm.											
3.	3. An alternative design standard is being used. ***Act 167 Plan Greater than 5 years old											
4. 🛛 A pri	4. 🛛 A printout of DEP's PCSM Spreadsheet – Volume Worksheet is attached.											
5. 2-Year/2	4-Hour Storn	n Event:	in	ches So	ource of precip	oitation data:						
6. Stormwa	iter Runoff Vo	olume, Pre	e-Construction Co	onditions:		CF [☐ Calcu	lations attached				
7. Stormwa	iter Runoff Vo	olume, Po	st-Construction C	Conditions:		CF [Calcu	lations attached				
8. Net Cha	nge (Post-Co	nstruction	- Pre-Construct	ion Volumes)	•	CF						
9. Identify a	all selected st	ructural P	CSM BMPs and	provide the in	formation req	uested. [☐ Calcu	lations attached				
DP No.	BMP ID	Series	Vol. Routed to BMP (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)	
								Tota	Il Infiltration &	ET Credits (CF):		

Managed Release Credits (CF) (Attach MRC Design Summary):

Volume Required to Reduce/Manage (CF):

	INFILTRATION INFORMATION									
BN	IP ID: 1									
1.	No. of infiltration tests completed: 4									
2.	Method(s) used for infiltration testing: Double ring infiltrometers									
3.	Test Pit Identifiers (from PCSM Plan Drawings): TP 116, TP 117									
4.	Avg Infiltration Rate: 1.5 in/hr 5. FOS: 3 :1									
6.	Infiltration rate used for design: 0.5 in/hr									
7.	Separation distance between the BMP bottom and bedrock: >2 feet									
8.	Separation distance between the BMP bottom and seasonal high-water table: >2 feet									
9.	Comments:									
BN	IP ID: ☐ Soil/geologic test results are attached.									
1.	No. of infiltration tests completed:									
2.	Method(s) used for infiltration testing:									
3.	Test Pit Identifiers (from PCSM Plan Drawings):									
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1									
6.	Infiltration Rate Used for Design: in/hr									
7.	Separation distance between the BMP bottom and bedrock: feet									
8.	Separation distance between the BMP bottom and seasonal high-water table: feet									
9.	Comments:									
BN	IP ID: ☐ Soil/geologic test results are attached.									
1.	No. of infiltration tests completed:									
2.	Method(s) used for infiltration testing:									
3.	Test Pit Identifiers (from PCSM Plan Drawings):									
4.	Avg Infiltration Rate: in/hr 5. FOS: :1									
6.	Infiltration Rate Used for Design: in/hr									
7.	Separation distance between the BMP bottom and bedrock: feet									
8.	Separation distance between the BMP bottom and seasonal high-water table: feet									
9.	Comments:									

STORMWATER ANALYSIS – PEAK RATE										
Surface Water Name:	Trout Bro	ok			Disc	charge Poi	nt(s): 00°	1		
1. The design sta	andard is base	ndard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.						ears.		
2. X The design sta	andard is base	d on manag	ging the net	change for 2	-, 10-, 50-, a	nd 100-yea	r/24-hour s	torms.		
3.	design standa	rd is being	used. <u>***Ac</u>	t 167 Plan G	reater than 5	years old				
4. 🛛 A printout of D	EP's PCSM S	preadsheet	– Rate Wor	ksheet is atta	ached.					
5. Alternative rate	e calculations	are attache	d.							
6. Identify precipitation	on amounts.	Sourc	e of precipita	ation data:	NOAA					
2-Year/24-Hour St	orm: 3.40)		10-Yea	r/24-Hour St	torm	5.00			
50-Year/24-Hour S	Storm: 7.33	3		100-Ye	ar/24-Hour \$	Storm	8.67			
7. Report peak disch	arge rates, pre	e- and post-	construction	(without BM	IPs), based o	on a time of	concentrat	tion analysis	S.	
Design Storm Pre-Cons		truction Pe (cfs)	eak Rate	Post-Con	struction Po	eak Rate	Di	fference (c	fs)	
2-Year/24-Hour		0.21		0.64			0.43			
10-Year/24-Hour		0.40	0.40		0.95			0.55		
50-Year/24-Hour		0.71		1.40			0.69			
100-Year/24-Hour		0.89		1.65			0.76			
8. Identify all BMPs u	used to mitigat	e peak rate	differences	and provide	the requeste	ed information	on.			
BMP ID		Inflow to		BMP (cfs)		0	utflow from	m BMP (cfs	s)	
טו וואוט		2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr	
1		0.52	0.77	1.14	1.35	0.00	0.00	0.00	0.12	
9. Report peak rates	for pre-constr	uction and p	oost-constru	ction with BN	/IPs and ider	ntify the diffe	erences.			
Design Storm	Pre-Cons	truction Pe (cfs)	eak Rate		struction Poth		Di	fference (c	fs)	
2-Year/24-Hour		0.21			0.11		-0.10			
10-Year/24-Hour		0.40			0.16			-0.24		
50-Year/24-Hour		0.71			0.24			-0.47		
100-Year/24-Hour		0.89		0.28			-0.61			

	STORMWATER AN	ALYSIS – WATER C	UALITY					
A printou	A printout of DEP's PCSM Spreadsheet – Quality Worksheet is attached for all surface waters receiving discharges.							
	LONG	G-TERM O&M						
Describe the	long-term operation and maintenance (O&M)	requirements for each	selected PCSM BMP.					
BMP ID		O&M Requirements	•					
	See Section 9.0 of the PCSM Plan Narrative	e for O&M requireme	nts.					
		LAN DEVELOPER						
	ned and experienced in PCSM methods.		sed professional.					
Name:	Patrick A. Wozinski	Title:	Project Engineer					
Company:	BAI Group, LLC	Phone No.:	(814) 238-2060					
Address:	366 Walker Drive, Suite 300	— Email:	pwozinski@baigroupllc.com					
City, State, Z	ZIP: State College, PA-16801	License No.:	PE078243					
License Type	e: Professional Engineer	Exp. Date	09/30/2023					
	PCSM Plan Developer Signature	03/01/2022 Date						
	PCSM Plan Developer Signature	-						

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COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF CLEAN WATER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) MODULE 2

Applicant:	pplicant: Transcontinental Gas Pipe Line Company, LLC		Project Site Name:		egional Energy Access Expansion oject - Hildebrandt Tie-in/MLV- 5RA40				
Surface Wat	er Name(s)	Trib 63042 to Toby Creek	Surface Water Use(s	S): CWF, MF					
		PCSM PL	AN INFORMATION						
1. Identify a	all structura	al and non-structural PCSM BMPs	that have been selected	and provide th	e information red	quested.			
Discharge Point(s)	BMP ID	BMP Name	BMP Manual	Latitude	Longitude	DA Treated (ac)			
001	1	Infiltration Bed	BMP 6.4.3	N41° 20' 48.84"	W75° 56' 47.04"	0.25			
Undetained	Areas:	0.08 acre(s)							
☐ The Proj	ect Qualifie	es as a Site Restoration Project (25	5 Pa. Code §102.8(n))						
2. Describe	the sequ	ence of PCSM BMP implement	ation in relation to eart	th disturbance	activities and a	a schedule of			

inspections for the critical stages of PCSM BMP installation.

	See Section 6.5 of the PCSM Plan Narratives for specific sequences and critical stage inspections for each PCSM BMP area.
3.	
4.	
5.	Recycling and proper disposal of materials associated with PCSM BMPs are addressed as part of long-term operation and maintenance of the PCSM BMPs.
6.	Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM BMPs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts.
	See Section 4.0 of the PCSM Plan Narrative.
7.	Identify whether the potential exists for thermal impacts to surface waters from post-construction stormwater. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts.
	Thermal impacts to surface waters are not anticipated. Most of the stormwater will be routed through the stormwater BMP designed to retain and infiltrate the first surge of water from the site. The first surge of water will be the warmest water for the duration of the storm event and will quickly cool as the storm event progresses. The BMPs are designed to capture and infiltrate this warmest surge of stormwater. Based on routing calculations, stormwater is retained in the BMPs for a period of 12 hours before being discharged during a 100-year/24-hour storm event. This retention period is longer for less intense storms. Therefore, as a result of these measures, no significant thermal impact to the receiving waters is anticipated.
8.	☐ The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.
9.	

STORMWATER ANALYSIS – RUNOFF VOLUME											
Surface Wat	er Name:	Trib 630	42 to Toby Cree	k				Discha	rge Point(s):	001	
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. X The	design stand	ard is base	ed on managing	the net chang	je for storms ι	up to and includ	ling the 2	2-year/24-hour st	orm.		
3.	Iternative des	sign standa	ard is being used	l. ***Act 167	Plan Greater	than 5 years old	<u>d</u>				
4. 🛭 A pri	ntout of DEP	's PCSM S	Spreadsheet – Vo	olume Worksh	neet is attache	ed.					
5. 2-Year/2	4-Hour Storn	n Event:	in	ches So	ource of precip	oitation data:					
6. Stormwa	ter Runoff Vo	olume, Pre	e-Construction Co	onditions:		CF [☐ Calcu	lations attached			
7. Stormwa	ter Runoff Vo	olume, Po	st-Construction C	Conditions:		CF [☐ Calcu	lations attached			
8. Net Char	nge (Post-Co	nstruction	- Pre-Construct	ion Volumes):		CF					
9. Identify a	all selected st	tructural P	CSM BMPs and	provide the in	formation req	uested. [☐ Calcu	lations attached			
DP No.	BMP ID	Series	Vol. Routed to BMP (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)
	Total Infiltration & ET Credits (CF):										

Managed Release Credits (CF) (Attach MRC Design Summary):

Volume Required to Reduce/Manage (CF):

	INFILTRATION INFORMATION									
BN	BMP ID: 1 Soil/geologic test results are attached.									
1.	No. of infiltration tests completed: 4									
2.	Method(s) used for infiltration testing: Double Ring infiltrometer									
3.	Test Pit Identifiers (from PCSM Plan Drawings): TP 106, TP 114/118									
4.	Avg Infiltration Rate: 1.47 in/hr 5. FOS: 9.2 : 1									
6.	Infiltration rate used for design: 0.16 in/hr									
7.	Separation distance between the BMP bottom and bedrock: >5 feet									
8.	Separation distance between the BMP bottom and seasonal high-water table: >5 feet									
9.	Comments:									
BN	IP ID: ☐ Soil/geologic test results are attached.									
1.	No. of infiltration tests completed:									
2.	Method(s) used for infiltration testing:									
3.	Test Pit Identifiers (from PCSM Plan Drawings):									
4.	Avg Infiltration Rate: in/hr 5. FOS: :1									
6.	Infiltration Rate Used for Design: in/hr									
7.	Separation distance between the BMP bottom and bedrock: feet									
8.	Separation distance between the BMP bottom and seasonal high-water table: feet									
9.	Comments:									
BN	IP ID: ☐ Soil/geologic test results are attached.									
1.	No. of infiltration tests completed:									
2.	Method(s) used for infiltration testing:									
3.	Test Pit Identifiers (from PCSM Plan Drawings):									
4.	Avg Infiltration Rate: in/hr 5. FOS: :1									
6.	Infiltration Rate Used for Design: in/hr									
7.	Separation distance between the BMP bottom and bedrock: feet									
8.	Separation distance between the BMP bottom and seasonal high-water table: feet									
9.	Comments:									

STORMWATER ANALYSIS – PEAK RATE										
Surface Water Name:	Trib 6304	2 to Toby C	reek		Disc	harge Poi	nt(s): 00	1		
1. The design sta	andard is base	in an Act 167 Plan approved by DEP within the past five years.								
2. The design sta	andard is base	ed on manag	jing the net	change for 2	-, 10-, 50-, a	nd 100-yea	r/24-hour s	torms.		
3. An alternative	design standa	ard is being (used. ***Ac	t 167 Plan G	reater than 5	years old				
4. 🛛 A printout of D	EP's PCSM S	Spreadsheet	– Rate Wor	ksheet is atta	ached.					
5. Alternative rate	e calculations	are attached	d.							
6. Identify precipitation	on amounts.	Source	e of precipita	ation data:	NOAA					
2-Year/24-Hour St	orm: 3.40	0		10-Yea	ır/24-Hour St	orm	5.00			
50-Year/24-Hour S	Storm: 7.33	3		100-Ye	ar/24-Hour S	Storm	8.67			
7. Report peak disch	arge rates, pr	e- and post-	construction	(without BM	IPs), based	on a time of	concentra	tion analysi	S.	
Design Storm Pre-Constr		truction Pe (cfs)	ak Rate	Post-Con	struction Po	eak Rate	Di	fference (c	fs)	
2-Year/24-Hour		0.38		1.15			0.77			
10-Year/24-Hour		0.74		1.77			1.03			
50-Year/24-Hour		1.31	1.31		2.67			1.36		
100-Year/24-Hour		1.64			3.19		1.55			
8. Identify all BMPs u	used to mitigat	te peak rate	differences	and provide	the requeste	ed information	on.			
BMP ID			Inflow to	BMP (cfs) O			utflow fro	m BMP (cfs	s)	
DINIF ID		2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr	
1		0.98	1.44	2.12	2.51	0.00	0.00	0.22	0.50	
9. Report peak rates	for pre-constr	ruction and p	ost-constru	ction with BN	/IPs and ider	ntify the diffe	erences.			
Design Storm	Pre-Cons	truction Pe (cfs)	ak Rate		struction Poth		Difference (cfs)			
2-Year/24-Hour		0.38			0.18		-0.20			
10-Year/24-Hour		0.74			0.33			-0.41		
50-Year/24-Hour		1.31			0.55			-0.76		
100-Year/24-Hour		1 64		0.73			-0.91			

	STORMWATER AN	ALYSIS – WATER C	UALITY					
A printou	A printout of DEP's PCSM Spreadsheet – Quality Worksheet is attached for all surface waters receiving discharges.							
	LONG	G-TERM O&M						
Describe the	long-term operation and maintenance (O&M)	requirements for each	selected PCSM BMP.					
BMP ID		O&M Requirements	•					
	See Section 9.0 of the PCSM Plan Narrative	e for O&M requireme	nts.					
		LAN DEVELOPER						
	ned and experienced in PCSM methods.		sed professional.					
Name:	Patrick A. Wozinski	Title:	Project Engineer					
Company:	BAI Group, LLC	Phone No.:	(814) 238-2060					
Address:	366 Walker Drive, Suite 300	— Email:	pwozinski@baigroupllc.com					
City, State, Z	ZIP: State College, PA-16801	License No.:	PE078243					
License Type	e: Professional Engineer	Exp. Date	09/30/2023					
	PCSM Plan Developer Signature	03/01/2022 Date						
	PCSM Plan Developer Signature	-						

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COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF CLEAN WATER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) MODULE 2

	Transconti Company,	nental Gas Pipe Line LLC	,	Regional Energy Access Expansion Project - MLV-505LD86			
Surface Water Name(s):		Sugar Hollow Creek	Surface Water Use(s):	HQ-CWF, MF - Existing CWF,MF - Designated			

Surface Water Name(s): Sugar Hollow Creek			Surface Water Use(s): HQ-CWF, MF - Existing CWF,MF - Designated						
		PCSM PLAN	INFORMATION						
1. Identify	all structu	ral and non-structural PCSM BMPs that	have been selected	and provide th	ne information red	quested.			
Discharge Point(s)	BMP ID	BMP Name	BMP Manual	Latitude	Longitude	DA Treated (ac)			
001	1	Infiltration Basin	BMP 6.4.2	N40° 58' 8.04"	W75° 25' 40.08"	4.4			
001	2	Subsurface Infiltration Bed	BMP 6.4.3	N40° 58' 6.2"	W75° 25' 39.7"	0.23			
001	3	Subsurface Infiltration Bed	BMP 6.4.3	N40° 58' 5.9"	W75° 25' 40.1"	0.13			
002	4	Infiltration Berm & Retentive Grading	BMP 6.4.10	N40° 58' 2.6"	W75° 25' 43.0"	1.46			
002	5	Infiltration Berm & Retentive Grading	BMP 6.4.10	N40° 58' 3.0"	W75° 25' 42.6"	1.57			
		·							
Undetained	Areas:	0.84 acre(s)							
☐ The Proj	ect Qualif	ies as a Site Restoration Project (25 Pa.	Code §102.8(n))						

2.	Describe the sequence of PCSM BMP impler	nentation in relation	to earth	disturbance	activities	and a	schedule	of
	inspections for the critical stages of PCSM BMP	installation.						

	See Section 6.2 of the PCSM Plan Narratives for specific sequences and critical stage inspections for each PCSM BMP area.
3.	Plan drawings have been developed for the project and will be available on-site.
4.	
5.	Recycling and proper disposal of materials associated with PCSM BMPs are addressed as part of long-term operation and maintenance of the PCSM BMPs.
6.	Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM BMPs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts.
	See Section 4.0 of the PCSM Plan Narrative.
7.	Identify whether the potential exists for thermal impacts to surface waters from post-construction stormwater. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts.
	Thermal impacts to surface waters are not anticipated. Most of the stormwater will be routed through the stormwater BMP designed to retain and infiltrate the first surge of water from the site. The first surge of water will be the warmest water for the duration of the storm event and will quickly cool as the storm event progresses. The BMPs are designed to capture and infiltrate this warmest surge of stormwater. Based on routing calculations, stormwater is retained in the BMPs for a period of 12 hours before being discharged during a 100-year/24-hour storm event. This retention period is longer for less intense storms. Therefore, as a result of these measures, no significant thermal impact to the receiving waters is anticipated.
8.	☐ The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.
9.	

STORMWATER ANALYSIS – RUNOFF VOLUME											
Surface Wat	er Name:	Sugar H	ollow Creek	Discharge Point(s):					001, 002, 003		
1.	design stand	ard is base	ed on volume ma	nagement re	quirements in	an Act 167 Pla	n approv	ed by DEP withi	n the past five	/ears.	
2. X The	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. ***Act 167 Plan Greater than 5 years old											
4. 🛛 A pri	4. A printout of DEP's PCSM Spreadsheet – Volume Worksheet is attached.										
5. 2-Year/2	4-Hour Storn	n Event:	in	ches So	ource of precip	oitation data:					
6. Stormwa	6. Stormwater Runoff Volume, Pre-Construction Conditions: CF Calculations attached										
7. Stormwa	iter Runoff Vo	olume, Po	st-Construction C	Conditions:		CF [☐ Calcu	lations attached			
8. Net Char	nge (Post-Co	nstruction	Pre-Construct	ion Volumes):		CF					
9. Identify a	all selected s	tructural P	CSM BMPs and	provide the in	formation req	uested. [☐ Calcu	lations attached			
DP No.	BMP ID	Series	Vol. Routed to BMP (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)
								Tota	I Infiltration &	ET Credits (CF):	

Managed Release Credits (CF) (Attach MRC Design Summary):

Volume Required to Reduce/Manage (CF):

INFILTRATION INFORMATION							
BMP ID: 1 Soil/geologic test results are attached.							
1. No. of infiltration tests completed: 4							
2. Method(s) used for infiltration testing: Double Ring Infiltrometers							
3. Test Pit Identifiers (from PCSM Plan Drawings): TP202 & TP203							
4. Avg Infiltration Rate: 14.8 in/hr 5. FOS: 4.9 : 1							
6. Infiltration rate used for design: 3.0 in/hr							
7. Separation distance between the BMP bottom and bedrock: >4 feet							
8. Separation distance between the BMP bottom and seasonal high-water table: >4 feet							
9. Comments:							
BMP ID: 2 & 3							
No. of infiltration tests completed: 2							
· · · · · · · · · · · · · · · · · · ·							
3. Test Pit Identifiers (from PCSM Plan Drawings): TP204							
4. Avg Infiltration Rate: 12.38 in/hr 5. FOS: 4.1 : 1							
6. Infiltration Rate Used for Design: 3.0 in/hr							
7. Separation distance between the BMP bottom and bedrock: >2 feet							
8. Separation distance between the BMP bottom and seasonal high-water table: >2 feet							
9. Comments:							
BMP ID: 4 & 5 Soil/geologic test results are attached.							
No. of infiltration tests completed: 4							
Method(s) used for infiltration testing: Double Ring Infiltrometers							
Test Pit Identifiers (from PCSM Plan Drawings): TP206 & TP207							
4. Avg Infiltration Rate: >18 in/hr 5. FOS: 6 :1							
6. Infiltration Rate Used for Design: 3.0 in/hr							
7. Separation distance between the BMP bottom and bedrock: >2.25 feet							
8. Separation distance between the BMP bottom and seasonal high-water table: >2.25 feet							
9. Comments:							

STORMWATER ANALYSIS – PEAK RATE										
Surface Water Name:	Sugar Ho	llow Creek			Disc	charge Poi	nt(s): 00	1		
1. The design sta	andard is base	ed on rate re	equirements	in an Act 16	7 Plan appro	ved by DEF	within the	past five y	ears.	
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 standa	ard is being	used. ***Ac	t 167 Plan G	reater than 5	years old				
4. 🛛 A printout of D	EP's PCSM S	Spreadsheet	t – Rate Wor	ksheet is att	ached.					
5. Alternative rate	e calculations	are attache	·d.							
6. Identify precipitation	on amounts	Sourc	ce of precipit	ation data:	NOAA					
2-Year/24-Hour St			or precipit		r/24-Hour Si	torm	4.74			
50-Year/24-Hour S	Storm: 6.8	7		100-Ye	ar/24-Hour S	Storm	8.09			
7. Report peak disch	arge rates, pr	e- and post-	-constructior	(without BM	IPs), based	on a time of	concentra	tion analysi	s.	
Design Storm	Design Storm Pre-Construction Peak Rate (cfs)			Post-Con	struction P	eak Rate	Difference (cfs)			
2-Year/24-Hour		0.01			0.07			0.06		
10-Year/24-Hour		0.15			1.36		1.21			
50-Year/24-Hour		2.00			6.23			4.23		
100-Year/24-Hour		3.90			10.01			6.11		
8. Identify all BMPs u	used to mitiga	te peak rate	differences	and provide	the requeste	ed information	on.			
BMP ID	Inflow to						utflow fro	m BMP (cfs	s)	
		2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr	
1		0.04	0.86	4.33	7.09	0.00	0.00	0.42	3.09	
2		0.23	0.60	1.22	1.61	0.00	0.00	0.32	1.12	
3		0.21	0.45	0.83	1.05	0.00	0.12	0.76	1.00	
9. Report peak rates	for pre-const	ruction and	post-constru	ction with BN	/IPs and ider	ntify the diffe	erences.			
Design Storm	Pre-Cons	struction Pe (cfs)	eak Rate		Post-Construction Peak Rate (with BMPs) (cfs)			Difference (cfs)		
2-Year/24-Hour		0.01		0.00			-0.01			
10-Year/24-Hour		0.15		0.13			-0.02			
50-Year/24-Hour		2.00		1.54			-0.46			
100-Year/24-Hour 3.90					3.58		-0.32			

Surface Water Name: Sugar Hollow Creek Discharge Point(s): 002										
1. The design stand	dard is base	d on rate re	quirements	in an Act 167	7 Plan appro	ved by DEP	within the	past five ye	ears.	
2. The design stand	2. 🗵 The design standard is based on managing the net change for 2-, 10-, 50-, and 100-year/24-hour storms.									
3. An alternative de	esign standa	rd is being ເ	used. <u>***Act</u>	167 Plan Gr	eater than 5	years old				
4. 🛛 A printout of DEF	P's PCSM S	preadsheet	– Rate Wor	ksheet is atta	ached.					
5. Alternative rate c	calculations a	are attached	d.							
6. Identify precipitation	amounts.	Source	e of precipita	ation data:	NOAA					
2-Year/24-Hour Storr	m: 3.26	3		10-Yea	ır/24-Hour St	orm	4.74			
50-Year/24-Hour Sto	orm: 6.87	,		100-Ye	ar/24-Hour S	Storm	8.09			
7. Report peak discharg	ge rates, pre	e- and post-	construction	(without BM	IPs), based o	on a time of	concentrat	tion analysis	S.	
Design Storm	Pro-Construction Peak Pate					eak Rate	Di	fference (c	fs)	
2-Year/24-Hour		0.93			1.76			0.83		
10-Year/24-Hour		3.22		4.01			0.79			
50-Year/24-Hour		7.61		7.75				0.14		
100-Year/24-Hour		10.45			10.03			-0.42		
8. Identify all BMPs use	ed to mitigate	e peak rate	differences	and provide	the requeste	d information	n.			
DMD ID			Inflow to	BMP (cfs)		0	utflow fro	m BMP (cfs	5)	
BMP ID	-	2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr	
4		1.26	3.06	6.11	7.98	0.00	2.45	5.83	7.68	
5		0.28	2.51	5.95	7.83	0.00	1.75	5.78	7.65	
9. Report peak rates for	r pre-constru	uction and p	ost-constru	ction with BN	/IPs and ider	tify the diffe	erences.	l	1	
Design Storm	Pre-Const	truction Pe (cfs)	ak Rate		struction Pe th BMPs) (ct		Di	fference (c	fs)	
2-Year/24-Hour	0.93				0.39			-0.54		
10-Year/24-Hour		3.22		1.80				-1.42		
50-Year/24-Hour 7.61			5.94				-1.67			
100-Year/24-Hour		10.45			7.82			-2.63		

STORMWATER ANALYSIS - PEAK RATE

STORMWATER ANALYSIS – PEAK RATE									
Surface Water Name:	Sugar Ho	llow Creek			Disc	harge Poir	nt(s): 00	03	
10. The design sta	andard is base	ed on rate re	quirements	in an Act 167	7 Plan appro	ved by DEF	within th	e past five ye	ears.
11. X The design sta	andard is base	ed on manag	ging the net	change for 2	-, 10-, 50-, aı	nd 100-year	r/24-hour	storms.	
12. An alternative	design standa	ard is being	used. ***Ac	t 167 Plan G	reater than 5	years old			
13. 🛛 A printout of D	EP's PCSM S	preadsheet	- Rate Wor	ksheet is atta	ached.				
14. Alternative rate	e calculations	are attache	d.						
15. Identify precipitation	on amounts.	Sourc	e of precipita	ation data:	NOAA				
2-Year/24-Hour St	orm: 3.26	6		10-Yea	ır/24-Hour St	orm	4.74		
50-Year/24-Hour S	Storm: 6.8	7		100-Ye	ar/24-Hour S	Storm	8.09		
16. Report peak disch	arge rates, pr	e- and post-	construction	(without BM	IPs), based o	on a time of	concentra	ation analysi	S.
Design Storm Pre-Construction Peak Rate (cfs)			ak Rate	Post-Con	struction Pe	eak Rate	Difference (cfs)		
2-Year/24-Hour		0.00		0.00			0.00		
10-Year/24-Hour		0.05		0.05			0.00		
50-Year/24-Hour		1.25			1.25			0.00	
100-Year/24-Hour		3.12			3.12			0.00	
17. Identify all BMPs ເ	used to mitigat	e peak rate	differences	and provide	the requeste	d information	on.		
BMP ID			Inflow to	BMP (cfs)		0	outflow from BMP (cfs)		
		2-Yr	10-Yr	50-Yr 100-Yr 2-Yr		10-Yr	50-Yr	100-Yr	
18. Report peak rates		·				-	erences.		
Design Storm	Pre-Cons	truction Pe (cfs)	ak Rate	Post-Construction Peak Rate (with BMPs) (cfs)				Difference (cfs)	
2-Year/24-Hour									
10-Year/24-Hour									
50-Year/24-Hour									
100-Year/24-Hour									

	STORMWATER ANALYSIS – WATER QUALITY									
A printou	t of DEP's PCSM Spreadsheet – Quality Work	sheet is attached for a	Il surface waters receiving discharges.							
	LONG-TERM O&M									
Describe the	scribe the long-term operation and maintenance (O&M) requirements for each selected PCSM BMP.									
BMP ID		O&M Requirements	•							
	See Section 9.0 of the PCSM Plan Narrative	e for O&M requireme	nts.							
		LAN DEVELOPER								
	ned and experienced in PCSM methods.		sed professional.							
Name:	Patrick A. Wozinski	Title:	Project Engineer							
Company:	BAI Group, LLC	Phone No.:	(814) 238-2060							
Address:	366 Walker Drive, Suite 300	— Email:	pwozinski@baigroupllc.com							
City, State, Z	ZIP: State College, PA-16801	License No.:	PE078243							
License Type	e: Professional Engineer	Exp. Date	09/30/2023							
	PCSM Plan Developer Signature	03/01/2022 Date								
	PCSM Plan Developer Signature	-								

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pennsylvania

DEPARTMENT OF ENVIRONMENTAL
PROTECTION

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF CLEAN WATER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) MODULE 2

Applicant:	Transco Compan	ntinental Gas Pipe Line y, LLC	Project Site Name:	Regional Energy Access Expansion Project - Compressor Station 200							
Surface Wate	er Name(s): Valley Creek, Trib. 00279 to Valley Creek	Surface Water Use(s)	EV, MF CWF, MF							
PCSM PLAN INFORMATION											
1. Identify a	all structura	al and non-structural PCSM BMPs tha	t have been selected a	and provide the	information red	quested.					
Discharge Point(s)	BMP ID	BMP Name	BMP Manual	Latitude	Longitude	DA Treated (ac)					
001	1	Infiltration Berm & Retentive Grading	6.4.10	N40° 02' 59.64"	W75° 35' 09.24"	0.61					
001	2	Vegetated Filter Strip	6.4.9	N40° 03' 00.3"	W75° 35' 09.8"	0.22					
Undetained	Areas:	acre(s)									
☐ The Proj	ect Qualifie	es as a Site Restoration Project (25 Pa	a. Code §102.8(n))								
		uence of PCSM BMP implementatio critical stages of PCSM BMP installati		n disturbance a	activities and a	a schedule of					
See Sec BMP are		f the PCSM Plan Narratives for spec	cific sequences and o	critical stage in	nspections for	each PCSM					

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- Image: Plan drawings have been developed for the project and will be available on-site.
 Plan drawings have been developed for the project and are attached to the NOI/application.
 Recycling and proper disposal of materials associated with PCSM BMPs are addressed as part of long-term operation and maintenance of the PCSM BMPs.
 Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM BMPs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts.
 See Section 4.0 of the PCSM Plan Narrative.
- 7. Identify whether the potential exists for thermal impacts to surface waters from post-construction stormwater. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts.

Thermal impacts to surface waters are not anticipated. Most of the stormwater will be routed through the stormwater BMP designed to retain and infiltrate the first surge of water from the site. The first surge of water will be the warmest water for the duration of the storm event and will quickly cool as the storm event progresses. The BMPs are designed to capture and infiltrate this warmest surge of stormwater. Based on routing calculations, stormwater is retained in the BMPs for a period of 11.50 hours before being discharged during a 100-year/24-hour storm event. This retention period is longer for less intense storms. Therefore, as a result of these measures, no significant thermal impact to the receiving waters is anticipated.

- 8.

 The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.
- A pre-development site characterization has been performed.

	STORMWATER ANALYSIS – RUNOFF VOLUME										
Surface Wat	er Name:	Valley C	reek, Trib. 0027	9 to Valley C	reek			Discha	rge Point(s):	001	
1.	design stand	ard is base	ed on volume ma	inagement re	quirements in	an Act 167 Pla	n approv	ed by DEP withi	n the past five y	ears.	
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. ***Act 167 Plan Greater than 5 years old											
4. 🛭 A pri	4. A printout of DEP's PCSM Spreadsheet – Volume Worksheet is attached.										
5. 2-Year/2	4-Hour Storn	n Event:	in	ches So	ource of precip	pitation data:					
6. Stormwater Runoff Volume, Pre-Construction Conditions: CF Calculations attached											
7. Stormwa	ter Runoff Vo	olume, Po	st-Construction C	Conditions:		CF [Calcu	llations attached			
8. Net Char	nge (Post-Co	nstruction	Pre-Construct	ion Volumes)	•	CF					
9. Identify a	all selected s	tructural P	CSM BMPs and	provide the in	formation req	juested. [☐ Calcu	lations attached			
DP No.	BMP ID	Series	Vol. Routed to BMP (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											
								Tota	I Infiltration &	ET Credits (CF):	

Managed Release Credits (CF) (Attach MRC Design Summary):

Volume Required to Reduce/Manage (CF):

	INFILTRATION INFORMATION								
BN	BMP ID: Soil/geologic test results are attached.								
1.	No. of infiltration tests completed: See Attachment 3 of PCSM Plan Narrative for Infiltration Information								
2.	Method(s) used for infiltration testing: Double-ring Infiltrometer test								
3.	Test Pit Identifiers (from PCSM Plan Drawings): BH 6								
4.	Avg Infiltration Rate: 0.25 in/hr 5. FOS: 2 : 1								
6.	Infiltration rate used for design: 0.125 in/hr								
7.	Separation distance between the BMP bottom and bedrock: > 4.5 feet								
8.	Separation distance between the BMP bottom and seasonal high-water table: 2.05 feet								
9.	Comments:								
BN	✓ Soil/geologic test results are attached.								
1.	No. of infiltration tests completed:								
2.	Method(s) used for infiltration testing:								
3.	Test Pit Identifiers (from PCSM Plan Drawings):								
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1								
6.	Infiltration Rate Used for Design: in/hr								
7.	Separation distance between the BMP bottom and bedrock: feet								
8.	Separation distance between the BMP bottom and seasonal high-water table: feet								
9.	Comments: Evapotranspiration								
BN	MP ID: ☐ Soil/geologic test results are attached.								
1.	No. of infiltration tests completed:								
2.	Method(s) used for infiltration testing:								
3.	Test Pit Identifiers (from PCSM Plan Drawings):								
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1								
6.	Infiltration Rate Used for Design: in/hr								
7.	Separation distance between the BMP bottom and bedrock: feet								
8.	Separation distance between the BMP bottom and seasonal high-water table: feet								
9.	Comments:								

	STORMWATER ANALYSIS – PEAK RATE									
Surface Water Name:	: Valley Cr	eek		Discharge Point(s): 001						
1. The design sta	andard is base	ed on rate re	equirements	in an Act 167	7 Plan appro	ved by DEF	within the	past five y	ears.	
2. The design sta	andard is base	ed on manaç	ging the net	change for 2	-, 10-, 50-, a	nd 100-yea	r/24-hour st	torms.		
3. An alternative	design standa	ard is being	used. ***Ac	t 167 Plan G	reater than 5	years old				
4. 🛛 A printout of D	A printout of DEP's PCSM Spreadsheet – Rate Worksheet is attached.									
5. Alternative rate	e calculations	are attache								
6. Identify precipitation	6. Identify precipitation amounts. Source of precipitation data: NOAA									
2-Year/24-Hour St	2-Year/24-Hour Storm: 3.30 10-Year/24-Hour Storm 4.90									
50-Year/24-Hour S	Storm: 6.5 5	3		100-Ye	ear/24-Hour S	Storm	7.63			
7. Report peak disch	arge rates, pr	e- and post-	-construction	(without BM	1Ps), based o	on a time of	concentrat	ion analysi	S.	
Design Storm Pre-Construction Peak Rate (cfs)				Post-Construction Peak Rate (cfs)			Difference (cfs)			
2-Year/24-Hour		3.81			4.35			0.54		
10-Year/24-Hour		8.95		9.71			0.76			
50-Year/24-Hour 14.88					15.78		0.90			
100-Year/24-Hour		19.07			20.04			0.97		
8. Identify all BMPs u	used to mitigat	te peak rate	differences	and provide	the requeste	ed information	on.			
DMD ID			Inflow to	BMP (cfs)	MP (cfs) O			m BMP (cfs	s)	
BMP ID		2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr	
1		1.58	2.78	4.02	4.85	0.19	0.59	1.86	2.74	
2		0.50	0.93	1.37	1.68	0.50	0.93	1.37	1.68	
9. Report peak rates	for pre-constr	uction and	post-constru	ction with BN	MPs and ider	ntify the diffe	erences.			
Design Storm	Pre-Cons	truction Pe (cfs)	ak Rate		struction Po th BMPs) (c		Dit	Difference (cfs)		
2-Year/24-Hour		3.81			2.49			-1.32		
10-Year/24-Hour		8.95		6.29			-2.66			
50-Year/24-Hour		14.88		11.98			-2.90			
100-Year/24-Hour 19.07				16.02			-3.05			

	STORMWATER ANALYSIS – WATER QUALITY									
A printou	t of DEP's PCSM Spreadsheet – Quality Work	sheet is attached for a	Il surface waters receiving discharges.							
	LONG-TERM O&M									
Describe the	scribe the long-term operation and maintenance (O&M) requirements for each selected PCSM BMP.									
BMP ID		O&M Requirements	•							
	See Section 9.0 of the PCSM Plan Narrative	e for O&M requireme	nts.							
		LAN DEVELOPER								
	ned and experienced in PCSM methods.		sed professional.							
Name:	Patrick A. Wozinski	Title:	Project Engineer							
Company:	BAI Group, LLC	Phone No.:	(814) 238-2060							
Address:	366 Walker Drive, Suite 300	— Email:	pwozinski@baigroupllc.com							
City, State, Z	ZIP: State College, PA-16801	License No.:	PE078243							
License Type	e: Professional Engineer	Exp. Date	09/30/2023							
	PCSM Plan Developer Signature	03/01/2022 Date								
	PCSM Plan Developer Signature	-								

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COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF CLEAN WATER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) MODULE 2

Applicant:	Transcontinental Gas Pipe Line Company, LLC		Project Site Name: Regional Energy Access Expansion Project - Compressor Station 515			
Surface Wate	urface Water Name(s): Trib 04285 to Shades Creek, Stony Run		Surface Water Use(s): HQ-CWF, MF HQ-CWF, MF			
PCSM PLAN INFORMATION						
1. Identify all structural and non-structural PCSM BMPs that have been selected and provide the information requested.						
Discharge Point(s)	BMP ID	BMP Name	BMP Manual	Latitude	Longitude	DA Treated (ac)
001	1	Vegetated Filter Strip	6.4.9	N41° 10' 28.60"	W75° 40' 19.30"	3.82
001	2	Infiltration Berm & Retentive Grading	6.4.10	N41° 10' 29.28"	W75° 40' 19.20"	4.54
Undetained Areas: acre(s)						
☐ The Proje	ect Qualifi	es as a Site Restoration Project (25 Pa.	Code §102.8(n))			

Describe the sequence of PCSM BMP implementation in relation to earth disturbance activities and a schedule of

inspections for the critical stages of PCSM BMP installation.

	See Section 6.0 of the PCSM Plan Narratives for specific sequences and critical stage inspections for each PCSM BMP area.
3.	Plan drawings have been developed for the project and will be available on-site.
4.	☑ Plan drawings have been developed for the project and are attached to the NOI/application.
5.	Recycling and proper disposal of materials associated with PCSM BMPs are addressed as part of long-term operation and maintenance of the PCSM BMPs.
6.	Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM BMPs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts.
	See Section 4.0 of the PCSM Plan Narrative.
7.	Identify whether the potential exists for thermal impacts to surface waters from post-construction stormwater. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts.
	Thermal impacts to surface waters are not anticipated. Most of the stormwater will be routed through the stormwater BMP designed to retain and infiltrate the first surge of water from the site. The first surge of water will be the warmest water for the duration of the storm event and will quickly cool as the storm event progresses. The BMPs are designed to capture and infiltrate this warmest surge of stormwater. Based on routing calculations, stormwater is retained in the BMPs for a period of 11 hours before being discharged during a 100-year/24-hour storm event. This retention period is longer for less intense storms. Therefore, as a result of these measures, no significant thermal impact to the receiving waters is anticipated.
8.	☐ The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.
9.	

STORMWATER ANALYSIS – RUNOFF VOLUME											
Surface Water Name: Trib 04285 to Shades Creek, Stony Run Discharge Point(s): 001											
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. X The	2. 🔲 The design standard is based on managing the net change for storms up to and including the 2-year/24-hour storm.										
3.	Iternative des	sign standa	ard is being used	l. ***Act 167	Plan Greater	than 5 years ol	<u>d</u>				
4. 🛭 A pri	ntout of DEP	's PCSM S	Spreadsheet – Vo	olume Worksl	neet is attache	ed.					
5. 2-Year/2	4-Hour Storn	n Event:	in	ches So	ource of precip	oitation data:					
6. Stormwa	iter Runoff Vo	olume, Pre	e-Construction Co	onditions:		CF [Calcu	ulations attached			
7. Stormwa	iter Runoff Vo	olume, Po	st-Construction C	Conditions:		CF [☐ Calcu	ulations attached			
8. Net Cha	nge (Post-Co	nstruction	- Pre-Construct	ion Volumes)	:	CF					
9. Identify a	all selected st	ructural P	CSM BMPs and	provide the in	nformation req	uested. [☐ Calcu	ulations attached			
DP No.	BMP ID	Series	Vol. Routed to BMP (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)
								Tota	l Infiltration &	ET Credits (CF):	

Non-Structural BMP Volume Credits (CF) (Attach Calculations):

Managed Release Credits (CF) (Attach MRC Design Summary):

Volume Required to Reduce/Manage (CF):

Total Credits (CF):

See Attachment 3 of PCSM Plan Narrative for Infiltration Information

	INFILTRATION INFORMATION
ви	IP ID: 1 ☐ Soil/geologic test results are attached.
1.	No. of infiltration tests completed: N/A
2.	Method(s) used for infiltration testing: N/A
3.	Test Pit Identifiers (from PCSM Plan Drawings): N/A
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1
6.	Infiltration rate used for design: in/hr
7.	Separation distance between the BMP bottom and bedrock: feet
8.	Separation distance between the BMP bottom and seasonal high-water table: feet
9.	Comments:
BN	IP ID: 2 ⊠ Soil/geologic test results are attached.
1.	No. of infiltration tests completed: 4
2.	Method(s) used for infiltration testing: Double ring infiltrometer
3.	Test Pit Identifiers (from PCSM Plan Drawings): TP 501, TP 502
4.	Avg Infiltration Rate: 1.19 in/hr 5. FOS: 3.8 : 1
6.	Infiltration Rate Used for Design: 0.31 in/hr
7.	Separation distance between the BMP bottom and bedrock: >3.6 feet
8.	Separation distance between the BMP bottom and seasonal high-water table: 3.6 feet
9.	Comments:
BN	IP ID: ☐ Soil/geologic test results are attached.
1.	No. of infiltration tests completed:
2.	Method(s) used for infiltration testing:
3.	Test Pit Identifiers (from PCSM Plan Drawings):
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1
6.	Infiltration Rate Used for Design: in/hr
7.	Separation distance between the BMP bottom and bedrock: feet
8.	Separation distance between the BMP bottom and seasonal high-water table: feet
9.	Comments:

STORMWATER ANALYSIS – PEAK RATE										
Surface Water Name:	Surface Water Name: Trib 04285 to Shades Creek, Stony Run Discharge Point(s): 001									
1. The design sta	1. The design standard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.								ears.	
2. The design sta	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 standa	ard is being u	used. ***Act	t 167 Plan G	reater than t	years old				
4. A printout of D	EP's PCSM S	Spreadsheet	– Rate Wor	ksheet is att	ached.					
5. Alternative rate	e calculations	are attached	d.							
6. Identify precipitation	on amounts.	Source	e of precipita	ation data:	NOAA					
2-Year/24-Hour St	orm: 3.40	0		10-Yea	ır/24-Hour S	torm	5.00			
50-Year/24-Hour S	Storm: 7.10	6		100-Ye	ar/24-Hour	Storm	8.43			
7. Report peak disch	arge rates, pr	e- and post-	construction	(without BM	IPs), based	on a time of	concentra	tion analysis	S.	
Design Storm	Pre-Cons	truction Pe	ak Rate	Post-Con	struction P (cfs)	eak Rate	Difference (cfs)			
2-Year/24-Hour		6.19		14.31			8.12			
10-Year/24-Hour		11.74		23.16			11.42			
50-Year/24-Hour		19.64		35.00			15.36			
100-Year/24-Hour		24.34			41.89		17.55			
8. Identify all BMPs used to mitigate peak rate differences and provide the requested information.										
BMP ID			Inflow to	BMP (cfs)		0	utflow fro	m BMP (cfs	s)	
DIVIF ID		2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr	
2		10.89	18.13	28.10	33.98	2.55	10.18	19.57	24.23	
9. Report peak rates	for pre-constr	uction and p	ost-constru	ction with BN	/IPs and ider	ntify the diffe	erences.			
Design Storm Pre-Construction Peak Rate (cfs)		Post-Construction Peak Rate (with BMPs) (cfs)			Difference (cfs)					
2-Year/24-Hour 6.1		6.19			2.55		-3.64			
10-Year/24-Hour		11.74			10.18			-1.56		
50-Year/24-Hour		19.64			19.57			-0.07		
100-Vear/24-Hour		24.34			24 23			-O 11		

	STORMWATER AN	ALYSIS – WATER O	QUALITY							
A printou	A printout of DEP's PCSM Spreadsheet – Quality Worksheet is attached for all surface waters receiving discharges.									
	LONG-TERM O&M									
Describe the	be the long-term operation and maintenance (O&M) requirements for each selected PCSM BMP.									
BMP ID	O&M Requirements									
	See Section 9.0 of the PCSM Plan Narrativ	e for O&M requireme	ents.							
	DOOM BY	AN DEVELOPED								
N 1 1 '-		LAN DEVELOPER	and another clausel							
	ned and experienced in PCSM methods.		sed professional.							
Name:	Patrick A. Wozinski	Title:	Project Engineer							
Company:	BAI Group, LLC	Phone No.:	(814) 238-2060							
Address:	366 Walker Drive, Suite 300	— Email:	pwozinski@baigroupllc.com							
City, State, Z	IP: State College, PA-16801	License No.:	PE078243							
License Type	e: Professional Engineer	Exp. Date	09/30/2023							
Petrogia		03/01/2022 Date								
	PCSM Plan Developer Signature	5 410								

MODULE 2 – POST CONSTRUCTION STORMWATER MANAGEMENT – SITE RESTORATION

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COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF CLEAN WATER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) MODULE 2

Surface Water Name(s): See Attachment 1.1-1 Surface Water Use(s): See Attachment 1.1-1 PCSM PLAN INFORMATION 1. Identify all structural and non-structural PCSM BMPs that have been selected and provide the information requestion.											
1. Identify all structural and non-structural PCSM BMPs that have been selected and provide the information reques	PCSM PLAN INFORMATION										
. Identify all structural and non-structural PCSM BMPs that have been selected and provide the information requested.											
Discharge Point(s) BMP BMP Name BMP Manual Latitude Longitude D	DA Treated (ac)										
Undetained Areas: acre(s)											
☐ The Project Qualifies as a Site Restoration Project (25 Pa. Code §102.8(n))											
2. Describe the sequence of PCSM BMP implementation in relation to earth disturbance activities and a so inspections for the critical stages of PCSM BMP installation.	schedule of										
N/A											

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3.	☑ Plan drawings have been developed for the project and will be available on-site.
4.	
5.	Recycling and proper disposal of materials associated with PCSM BMPs are addressed as part of long-term operation and maintenance of the PCSM BMPs.
6.	Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM BMPs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts.
	See Sections 4.0 and 13.0 of the E&SC/SR Plan Narratives for specific information pertaining to each project component.
7.	Identify whether the potential exists for thermal impacts to surface waters from post-construction stormwater. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts.
	See Sections 8.0 of the E&SC/SR Plan Narratives for specific information pertaining to each project component.
8.	☐ The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.
9.	

	STORMWATER ANALYSIS – RUNOFF VOLUME										
Surface Wat	Surface Water Name: Discharge Point(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.	2. The design standard is based on managing the net change for storms up to and including the 2-year/24-hour storm.										
3.	3.										
4.	ntout of DEP	's PCSM S	Spreadsheet – Vo	olume Worksł	neet is attache	ed.					
5. 2-Year/2	4-Hour Storn	n Event:	in	ches So	ource of precip	pitation data:					
6. Stormwa	6. Stormwater Runoff Volume, Pre-Construction Conditions: CF Calculations attached										
7. Stormwa	iter Runoff Vo	olume, Po	st-Construction C	Conditions:		CF [☐ Calcu	ulations attached			
8. Net Cha	nge (Post-Co	nstruction	- Pre-Construct	ion Volumes)	:	CF					
9. Identify a	all selected st	tructural P	CSM BMPs and	provide the in	formation req	uested. [☐ Calcu	ulations attached			
DP No.	BMP ID	Series	Vol. Routed to BMP (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)
								Tota	I Infiltration & E	T Credits (CF):	

Non-Structural BMP Volume Credits (CF) (Attach Calculations):

Managed Release Credits (CF) (Attach MRC Design Summary):

Volume Required to Reduce/Manage (CF):

Total Credits (CF):

	INFILTRATION INFORMATION								
BN	BMP ID: Soil/geologic test results are attached.								
1.	No. of infiltration tests completed:								
2.	Method(s) used for infiltration testing:								
3.	Test Pit Identifiers (from PCSM Plan Drawings):								
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1								
6.	Infiltration rate used for design: in/hr								
7.	Separation distance between the BMP bottom and bedrock: feet								
8.	Separation distance between the BMP bottom and seasonal high-water table: feet								
9.	Comments:								
BN	IP ID: □ Soil/geologic test results are attached.								
1.	No. of infiltration tests completed:								
2.	Method(s) used for infiltration testing:								
3.	Test Pit Identifiers (from PCSM Plan Drawings):								
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1								
6.	Infiltration Rate Used for Design: in/hr								
7.	Separation distance between the BMP bottom and bedrock: feet								
8.	Separation distance between the BMP bottom and seasonal high-water table: feet								
9.	Comments:								
BN	1P ID: □ Soil/geologic test results are attached.								
1.	No. of infiltration tests completed:								
2.	Method(s) used for infiltration testing:								
3.	Test Pit Identifiers (from PCSM Plan Drawings):								
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1								
6.	Infiltration Rate Used for Design: in/hr								
7.	Separation distance between the BMP bottom and bedrock: feet								
8.	Separation distance between the BMP bottom and seasonal high-water table: feet								
9.	Comments:								

STORMWATER ANALYSIS – PEAK RATE									
Surface Water Name:	Surface Water Name: Discharge Point(s):								
1. The design sta	. The design standard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.								
2. The design sta	andard is base	ed on manaç	ging the net	change for 2	-, 10-, 50-, a	nd 100-year	r/24-hour st	torms.	
3.	design standa	ard is being	used.						
4. A printout of D	EP's PCSM S	Spreadsheet	- Rate Wor	ksheet is atta	ached.				
5. Alternative rate	e calculations	are attache	d.						
6. Identify precipitation	on amounts.	Sourc	e of precipita	ation data:					
2-Year/24-Hour St					ır/24-Hour S	torm			
50-Year/24-Hour \$	Storm:			100-Ve	ear/24-Hour	Storm			
		a and neat	aanatruation				concentrat	ion onalysis	•
7. Report peak disch	· ·	truction Pe	1	•	struction P		concentrat	ion analysis	S.
Design Storm	Pre-cons	(cfs)	ak Kale	Post-Con	(cfs)	eak Kale	Dit	fference (c	fs)
2-Year/24-Hour									
10-Year/24-Hour									
50-Year/24-Hour									
100-Year/24-Hour									
8. Identify all BMPs u	used to mitiga	te peak rate	differences	and provide	the requeste	ed information	on.		
BMP ID			Inflow to	o BMP (cfs) Outflow from BMP (cfs)					
BINIF ID		2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr
9. Report peak rates	for pre-consti	ruction and p	oost-constru	ction with BN	/IPs and ide	ntify the diffe	erences.		
Design Storm Pre-Construction Peak Rate (cfs)			struction P th BMPs) (c		Difference (cfs)				
2-Year/24-Hour									
10-Year/24-Hour									
50-Year/24-Hour									
100-Year/24-Hour									

	STORMWATER AN	ALYSIS – WATER O	QUALITY							
A printou	A printout of DEP's PCSM Spreadsheet – Quality Worksheet is attached for all surface waters receiving discharges.									
	LONG-TERM O&M									
Describe the	be the long-term operation and maintenance (O&M) requirements for each selected PCSM BMP.									
BMP ID	O&M Requirements									
	See Section 9.0 of the PCSM Plan Narrativ	e for O&M requireme	ents.							
	DOOM BY	AN DEVELOPED								
N 1 1 '-		LAN DEVELOPER	and another clausel							
	ned and experienced in PCSM methods.		sed professional.							
Name:	Patrick A. Wozinski	Title:	Project Engineer							
Company:	BAI Group, LLC	Phone No.:	(814) 238-2060							
Address:	366 Walker Drive, Suite 300	— Email:	pwozinski@baigroupllc.com							
City, State, Z	IP: State College, PA-16801	License No.:	PE078243							
License Type	e: Professional Engineer	Exp. Date	09/30/2023							
Petrogia		03/01/2022 Date								
	PCSM Plan Developer Signature	5 410								

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF CLEAN WATER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) MODULE 2

Applicant:	Transcon Company	tinental Gas Pipe Line , LLC	Project Site Name:	Regional Energy Access Expansion Project - Effort Loop						
Surface Water	er Name(s):	See Attachment 1.1-1	Surface Water Use(s)	See Attachment 1.1-1						
PCSM PLAN INFORMATION										
1. Identify all structural and non-structural PCSM BMPs that have been selected and provide the information requested.										
Discharge Point(s)	BMP ID	BMP Name	BMP Manual	Latitude	Longitude	DA Treated (ac)				
Undetained	Areas:	acre(s)				1				
☐ The Proj	ect Qualifies	s as a Site Restoration Project (2	25 Pa. Code §102.8(n))							
		ence of PCSM BMP implement		disturbance	activities and a	a schedule of				
N/A	ons for the c	IIIIICAI SIAGES OI FCSIVI DIVIF IIISI	lallation.							

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3.	☐ Plan drawings have been developed for the project and will be available on-site.
4.	☑ Plan drawings have been developed for the project and are attached to the NOI/application.
5.	Recycling and proper disposal of materials associated with PCSM BMPs are addressed as part of long-term operation and maintenance of the PCSM BMPs.
6.	Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM BMPs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts.
	See Sections 4.0 and 13.0 of the E&SC/SR Plan Narratives for specific information pertaining to each project component.
7.	Identify whether the potential exists for thermal impacts to surface waters from post-construction stormwater. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts.
	See Sections 8.0 of the E&SC/SR Plan Narratives for specific information pertaining to each project component.
0	☐ The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.
8.	The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.
9.	A pre-development site characterization has been performed.

STORMWATER ANALYSIS – RUNOFF VOLUME												
Surface Wat	er Name:							Discha	rge Point(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/2	4-Hour Storn	n Event:	in	ches So	ource of precip	pitation data:						
6. Stormwa	6. Stormwater Runoff Volume, Pre-Construction Conditions: CF Calculations attached											
7. Stormwa	iter Runoff Vo	olume, Po	st-Construction C	Conditions:		CF [☐ Calcu	ulations attached				
8. Net Cha	nge (Post-Co	nstruction	- Pre-Construct	ion Volumes)	:	CF						
9. Identify a	all selected st	tructural P	CSM BMPs and	provide the in	formation req	uested. [☐ Calcu	ulations attached				
DP No.	BMP ID	Series	Vol. Routed to BMP (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)	
								Tota	I Infiltration & E	T Credits (CF):		

Non-Structural BMP Volume Credits (CF) (Attach Calculations):

Managed Release Credits (CF) (Attach MRC Design Summary):

Volume Required to Reduce/Manage (CF):

Total Credits (CF):

	INFILTRATION INFORMATION								
BN	IP ID: □ Soil/geologic test results are attached.								
1.	No. of infiltration tests completed:								
2.	Method(s) used for infiltration testing:								
3.	Test Pit Identifiers (from PCSM Plan Drawings):								
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1								
6.	Infiltration rate used for design: in/hr								
7.	Separation distance between the BMP bottom and bedrock: feet								
8.	Separation distance between the BMP bottom and seasonal high-water table: feet								
9.	Comments:								
BN	IP ID: □ Soil/geologic test results are attached.								
1.	No. of infiltration tests completed:								
2.	Method(s) used for infiltration testing:								
3.	Test Pit Identifiers (from PCSM Plan Drawings):								
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1								
6.	Infiltration Rate Used for Design: in/hr								
7.	Separation distance between the BMP bottom and bedrock: feet								
8.	Separation distance between the BMP bottom and seasonal high-water table: feet								
9.	Comments:								
BN	IP ID: □ Soil/geologic test results are attached.								
1.	No. of infiltration tests completed:								
2.	Method(s) used for infiltration testing:								
3.	Test Pit Identifiers (from PCSM Plan Drawings):								
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1								
6.	Infiltration Rate Used for Design: in/hr								
7.	Separation distance between the BMP bottom and bedrock: feet								
8.	Separation distance between the BMP bottom and seasonal high-water table: feet								
9.	Comments:								

STORMWATER ANALYSIS – PEAK RATE										
Surface Water Name:	Surface Water Name: Discharge Point(s):									
1. The design standard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.									ears.	
2. The design standard is based on managing the net change for 2-, 10-, 50-, and 100-year/24-hour storms.										
3.	3. An alternative design standard is being used.									
4. A printout of D										
5. Alternative rate	5. Alternative rate calculations are attached.									
6. Identify precipitation										
2-Year/24-Hour St					ır/24-Hour S	torm				
50-Year/24-Hour \$	Storm:			100-Ve	ear/24-Hour	Storm				
		a and neat	aanatruation				concentrat	ion onalysis	•	
7. Report peak disch	· ·	truction Pe	1	•	struction P		concentrat	ion analysis	S.	
Design Storm	Pre-cons	(cfs)	ak Kale	Post-Con	(cfs)	eak Kale	Dit	fference (c	fs)	
2-Year/24-Hour										
10-Year/24-Hour										
50-Year/24-Hour										
100-Year/24-Hour										
8. Identify all BMPs u	used to mitiga	te peak rate	differences	and provide	the requeste	ed information	on.			
BMP ID			Inflow to BMP (cfs)					utflow from BMP (cfs)		
BINIF ID		2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr	
9. Report peak rates	for pre-consti	ruction and p	oost-constru	ction with BN	/IPs and ide	ntify the diffe	erences.			
Design Storm	Design Storm Pre-Construction Peak Rate (cfs)				struction P th BMPs) (c		Dit	fference (c	fs)	
2-Year/24-Hour										
10-Year/24-Hour										
50-Year/24-Hour										
100-Year/24-Hour										

	STORMWATER ANALYSIS – WATER QUALITY									
A printou	t of DEP's PCSM Spreadsheet – Quality Work	sheet is attached for a	Il surface waters receiving discharges.							
	LONG-TERM O&M									
Describe the	escribe the long-term operation and maintenance (O&M) requirements for each selected PCSM BMP.									
BMP ID	O&M Requirements									
	See Section 9.0 of the PCSM Plan Narrative	e for O&M requireme	nts.							
		LAN DEVELOPER								
	ned and experienced in PCSM methods.		sed professional.							
Name:	Patrick A. Wozinski	Title:	Project Engineer							
Company:	BAI Group, LLC	Phone No.:	(814) 238-2060							
Address:	366 Walker Drive, Suite 300	— Email:	pwozinski@baigroupllc.com							
City, State, Z	ZIP: State College, PA-16801	License No.:	PE078243							
License Type: Professional Engineer		Exp. Date	09/30/2023							
	PCSM Plan Developer Signature	03/01/2022 Date								
	PCSM Plan Developer Signature	-								

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COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF CLEAN WATER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) MODULE 2

Applicant:	Transco Compan	ontinental Gas Pipe Line ny, LLC	Project Site Name:	Regional Energy Access Expansion Project - Delaware Regulator							
Surface Wate	er Name(s	S): See Attachment 1.1-1	Surface Water Use(s)	See Attac	chment 1.1-1						
PCSM PLAN INFORMATION											
1. Identify a	1. Identify all structural and non-structural PCSM BMPs that have been selected and provide the information requested.										
Discharge Point(s)	BMP ID	BMP Name	BMP Manual	Latitude	Longitude	DA Treated (ac)					
Undetained	Areas:	acre(s)									
	ect Qualific	es as a Site Restoration Project (25	Pa. Code §102.8(n))								
Describe inspection N/A	the sequence the	uence of PCSM BMP implemental critical stages of PCSM BMP install	tion in relation to earth	n disturbance	activities and a	a schedule of					
WA											

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3.	☑ Plan drawings have been developed for the project and will be available on-site.
4.	
5.	Recycling and proper disposal of materials associated with PCSM BMPs are addressed as part of long-term operation and maintenance of the PCSM BMPs.
6.	Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM BMPs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts.
	See Sections 4.0 and 13.0 of the E&SC/SR Plan Narratives for specific information pertaining to each project component.
7.	Identify whether the potential exists for thermal impacts to surface waters from post-construction stormwater. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts.
	See Sections 8.0 of the E&SC/SR Plan Narratives for specific information pertaining to each project component.
8.	☐ The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.
9.	A pre-development site characterization has been performed.

STORMWATER ANALYSIS – RUNOFF VOLUME												
Surface Wat	er Name:							Discha	rge Point(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.	4. A printout of DEP's PCSM Spreadsheet – Volume Worksheet is attached.											
5. 2-Year/2	4-Hour Storn	n Event:	in	ches So	ource of precip	pitation data:						
6. Stormwa	6. Stormwater Runoff Volume, Pre-Construction Conditions: CF Calculations attached											
7. Stormwa	iter Runoff Vo	olume, Po	st-Construction C	Conditions:		CF [☐ Calcu	ulations attached				
8. Net Cha	nge (Post-Co	nstruction	- Pre-Construct	ion Volumes)	:	CF						
9. Identify a	all selected st	tructural P	CSM BMPs and	provide the in	formation req	uested. [☐ Calcu	ulations attached				
DP No.	BMP ID	Series	Vol. Routed to BMP (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)	
								Tota	I Infiltration & E	T Credits (CF):		

Non-Structural BMP Volume Credits (CF) (Attach Calculations):

Managed Release Credits (CF) (Attach MRC Design Summary):

Volume Required to Reduce/Manage (CF):

Total Credits (CF):

	INFILTRATION INFORMATION								
BN	IP ID: □ Soil/geologic test results are attached.								
1.	No. of infiltration tests completed:								
2.	Method(s) used for infiltration testing:								
3.	Test Pit Identifiers (from PCSM Plan Drawings):								
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1								
6.	Infiltration rate used for design: in/hr								
7.	Separation distance between the BMP bottom and bedrock: feet								
8.	Separation distance between the BMP bottom and seasonal high-water table: feet								
9.	Comments:								
BN	IP ID: □ Soil/geologic test results are attached.								
1.	No. of infiltration tests completed:								
2.	Method(s) used for infiltration testing:								
3.	Test Pit Identifiers (from PCSM Plan Drawings):								
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1								
6.	Infiltration Rate Used for Design: in/hr								
7.	Separation distance between the BMP bottom and bedrock: feet								
8.	Separation distance between the BMP bottom and seasonal high-water table: feet								
9.	Comments:								
BN	IP ID: □ Soil/geologic test results are attached.								
1.	No. of infiltration tests completed:								
2.	Method(s) used for infiltration testing:								
3.	Test Pit Identifiers (from PCSM Plan Drawings):								
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1								
6.	Infiltration Rate Used for Design: in/hr								
7.	Separation distance between the BMP bottom and bedrock: feet								
8.	Separation distance between the BMP bottom and seasonal high-water table: feet								
9.	Comments:								

STORMWATER ANALYSIS – PEAK RATE										
Surface Water Name:	Surface Water Name: Discharge Point(s):									
1. The design standard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.									ears.	
2. The design standard is based on managing the net change for 2-, 10-, 50-, and 100-year/24-hour storms.										
3.	3. An alternative design standard is being used.									
4. A printout of D										
5. Alternative rate	5. Alternative rate calculations are attached.									
6. Identify precipitation										
2-Year/24-Hour St					ır/24-Hour S	torm				
50-Year/24-Hour \$	Storm:			100-Ve	ear/24-Hour	Storm				
		a and neat	aanatruation				concentrat	ion onalysis	•	
7. Report peak disch	· ·	truction Pe	1	•	struction P		concentrat	ion analysis	S.	
Design Storm	Pre-cons	(cfs)	ak Kale	Post-Con	(cfs)	eak Kale	Dit	fference (c	fs)	
2-Year/24-Hour										
10-Year/24-Hour										
50-Year/24-Hour										
100-Year/24-Hour										
8. Identify all BMPs u	used to mitiga	te peak rate	differences	and provide	the requeste	ed information	on.			
BMP ID			Inflow to BMP (cfs)					utflow from BMP (cfs)		
BINIF ID		2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr	
9. Report peak rates	for pre-consti	ruction and p	oost-constru	ction with BN	/IPs and ide	ntify the diffe	erences.			
Design Storm	Design Storm Pre-Construction Peak Rate (cfs)				struction P th BMPs) (c		Dit	fference (c	fs)	
2-Year/24-Hour										
10-Year/24-Hour										
50-Year/24-Hour										
100-Year/24-Hour										

	STORMWATER ANALYSIS – WATER QUALITY									
A printou	t of DEP's PCSM Spreadsheet – Quality Work	sheet is attached for a	Il surface waters receiving discharges.							
	LONG-TERM O&M									
Describe the	escribe the long-term operation and maintenance (O&M) requirements for each selected PCSM BMP.									
BMP ID	O&M Requirements									
	See Section 9.0 of the PCSM Plan Narrative	e for O&M requireme	nts.							
		LAN DEVELOPER								
	ned and experienced in PCSM methods.		sed professional.							
Name:	Patrick A. Wozinski	Title:	Project Engineer							
Company:	BAI Group, LLC	Phone No.:	(814) 238-2060							
Address:	366 Walker Drive, Suite 300	— Email:	pwozinski@baigroupllc.com							
City, State, Z	ZIP: State College, PA-16801	License No.:	PE078243							
License Type: Professional Engineer		Exp. Date	09/30/2023							
	PCSM Plan Developer Signature	03/01/2022 Date								
	PCSM Plan Developer Signature	-								

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF CLEAN WATER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) MODULE 2

Applicant:	Transcont Company,	inental Gas Pipe Line LLC	Project Site Name:	Regional Energy Access Expansion Project - Mainline A Regulator					
Surface Water	er Name(s):	See Attachment 1.1-1	Surface Water Use(s)	See Attac					
PCSM PLAN INFORMATION									
1. Identify a	all structural	and non-structural PCSM BMP	s that have been selected a	and provide th	e information red	quested.			
Discharge Point(s)	BMP ID	BMP Name	BMP Manual	Latitude	Longitude	DA Treated (ac)			
Undetained	Areas:	acre(s)	,		1				
	ect Qualifies	as a Site Restoration Project (2	25 Pa. Code §102.8(n))						
		nce of PCSM BMP implementitical stages of PCSM BMP inst		disturbance	activities and a	schedule of			
N/A		ilical stages of F Colvi Divil Ilisi	allation.						

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3.	☐ Plan drawings have been developed for the project and will be available on-site.						
4.	☑ Plan drawings have been developed for the project and are attached to the NOI/application.						
5.	Recycling and proper disposal of materials associated with PCSM BMPs are addressed as part of long-term operation and maintenance of the PCSM BMPs.						
6.	Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM BMPs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts.						
	See Sections 4.0 and 13.0 of the E&SC/SR Plan Narratives for specific information pertaining to each project component.						
7.	Identify whether the potential exists for thermal impacts to surface waters from post-construction stormwater. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts.						
	See Sections 8.0 of the E&SC/SR Plan Narratives for specific information pertaining to each project component.						
8.	The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.						
9.	A pre-development site characterization has been performed.						

	STORMWATER ANALYSIS – RUNOFF VOLUME										
Surface Wat	Surface Water Name: Discharge Point(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.	design stand	ard is base	ed on managing	the net chang	je for storms ι	up to and includ	ling the 2	2-year/24-hour st	orm.		
3.	Iternative des	sign standa	ard is being used	l.							
4.	ntout of DEP	's PCSM S	Spreadsheet – Vo	olume Worksł	neet is attache	ed.					
5. 2-Year/2	4-Hour Storn	n Event:	in	ches So	ource of precip	pitation data:					
6. Stormwa	iter Runoff Vo	olume, Pre	e-Construction Co	onditions:		CF [Calcu	ulations attached			
7. Stormwa	iter Runoff Vo	olume, Po	st-Construction C	Conditions:		CF [☐ Calcu	ulations attached			
8. Net Cha	nge (Post-Co	nstruction	- Pre-Construct	ion Volumes)	:	CF					
9. Identify a	all selected st	tructural P	CSM BMPs and	provide the in	formation req	uested. [☐ Calcu	ulations attached			
DP No.	BMP ID	Series	Vol. Routed to BMP (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)
								Tota	I Infiltration & E	T Credits (CF):	

Non-Structural BMP Volume Credits (CF) (Attach Calculations):

Managed Release Credits (CF) (Attach MRC Design Summary):

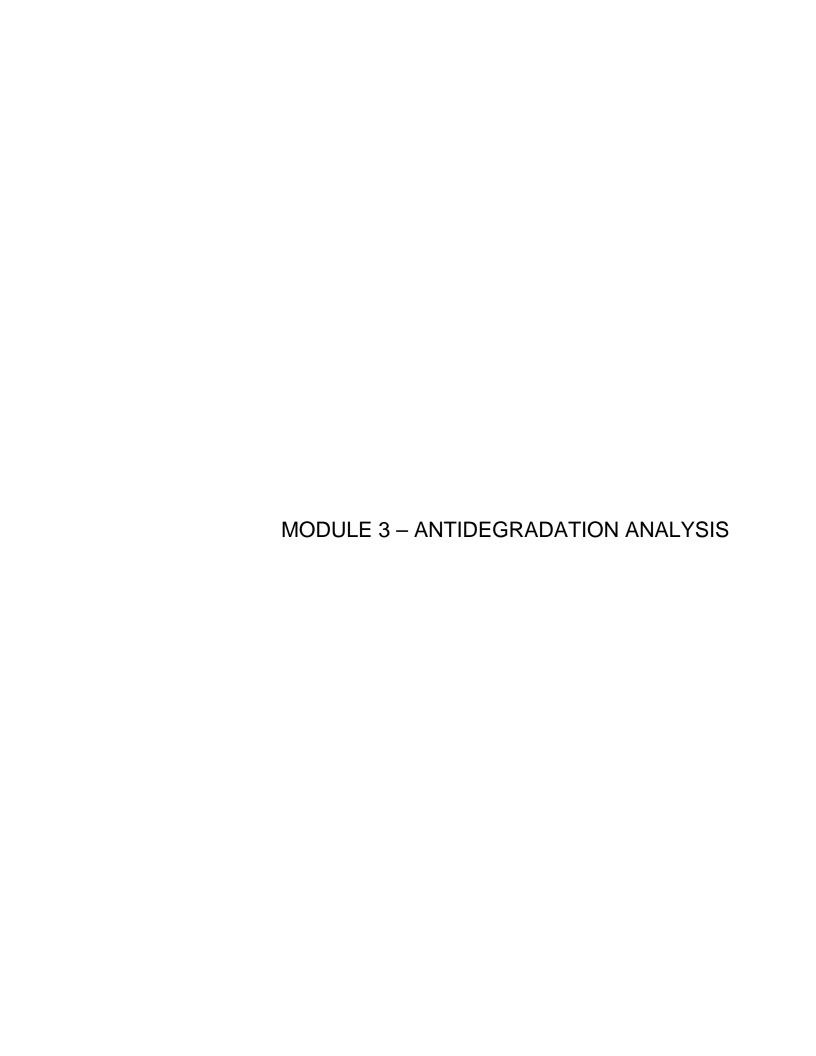
Volume Required to Reduce/Manage (CF):

Total Credits (CF):

	INFILTRATION INFORMATION						
BN	IP ID: □ Soil/geologic test results are attached.						
1.	No. of infiltration tests completed:						
2.	Method(s) used for infiltration testing:						
3.	Test Pit Identifiers (from PCSM Plan Drawings):						
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1						
6.	Infiltration rate used for design: in/hr						
7.	Separation distance between the BMP bottom and bedrock: feet						
8.	Separation distance between the BMP bottom and seasonal high-water table: feet						
9.	Comments:						
BN	IP ID: □ Soil/geologic test results are attached.						
1.	No. of infiltration tests completed:						
2.	Method(s) used for infiltration testing:						
3.	Test Pit Identifiers (from PCSM Plan Drawings):						
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1						
6.	Infiltration Rate Used for Design: in/hr						
7.	Separation distance between the BMP bottom and bedrock: feet						
8.	Separation distance between the BMP bottom and seasonal high-water table: feet						
9.	Comments:						
BN	IP ID: □ Soil/geologic test results are attached.						
1.	No. of infiltration tests completed:						
2.	Method(s) used for infiltration testing:						
3.	Test Pit Identifiers (from PCSM Plan Drawings):						
4.	Avg Infiltration Rate: in/hr 5. FOS: : 1						
6.	Infiltration Rate Used for Design: in/hr						
7.	Separation distance between the BMP bottom and bedrock: feet						
8.	Separation distance between the BMP bottom and seasonal high-water table: feet						
9.	Comments:						

STORMWATER ANALYSIS – PEAK RATE									
Surface Water Name:	Surface Water Name: Discharge Point(s):								
1. The design sta	andard is base	ed on rate re	quirements	in an Act 167	7 Plan appro	ved by DEF	within the	past five ye	ears.
2. The design sta	andard is base	ed on manaç	ging the net	change for 2	-, 10-, 50-, a	nd 100-year	r/24-hour st	torms.	
3.	design standa	ard is being	used.						
4. A printout of D	EP's PCSM S	Spreadsheet	- Rate Wor	ksheet is atta	ached.				
5. Alternative rate	e calculations	are attache	d.						
6. Identify precipitation	on amounts.	Sourc	e of precipita	ation data:					
2-Year/24-Hour St					ır/24-Hour S	torm			
50-Year/24-Hour \$	Storm:			100-Ve	ear/24-Hour	Storm			
		a and neat	aanatruation				concentrat	ion onalysis	•
7. Report peak disch	· ·	truction Pe	1	•	struction P		concentrat	ion analysis	S.
Design Storm	Pre-cons	(cfs)	ak Kale	Post-Con	(cfs)	eak Kale	Dit	fference (c	fs)
2-Year/24-Hour									
10-Year/24-Hour									
50-Year/24-Hour									
100-Year/24-Hour									
8. Identify all BMPs u	used to mitiga	te peak rate	differences	and provide	the requeste	ed information	on.		
BMP ID			Inflow to	O BMP (cfs) Outflow from BMP (cfs)					s)
BINIF ID		2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr
9. Report peak rates	for pre-consti	ruction and p	oost-constru	ction with BN	/IPs and ide	ntify the diffe	erences.		
Design Storm	Pre-Cons	struction Pe (cfs)	eak Rate	Post-Construction Peak Rate (with BMPs) (cfs) Difference (cfs)				fs)	
2-Year/24-Hour									
10-Year/24-Hour									
50-Year/24-Hour									
100-Year/24-Hour									

	STORMWATER ANALYSIS – WATER QUALITY						
A printou	A printout of DEP's PCSM Spreadsheet – Quality Worksheet is attached for all surface waters receiving discharges.						
	LONG	G-TERM O&M					
Describe the	long-term operation and maintenance (O&M)	requirements for each	selected PCSM BMP.				
BMP ID		O&M Requirements	•				
	See Section 9.0 of the PCSM Plan Narrative	e for O&M requireme	nts.				
		LAN DEVELOPER					
	ned and experienced in PCSM methods.		sed professional.				
Name:	Patrick A. Wozinski	Title:	Project Engineer				
Company:	BAI Group, LLC	Phone No.:	(814) 238-2060				
Address:	366 Walker Drive, Suite 300	— Email:	pwozinski@baigroupllc.com				
City, State, Z	ZIP: State College, PA-16801	License No.:	PE078243				
License Type	e: Professional Engineer	Exp. Date	09/30/2023				
	PCSM Plan Developer Signature	03/01/2022 Date					
	PCSM Plan Developer Signature	-					



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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES ANTIDEGRADATION ANALYSIS MODULE 3

Ар	plicant:	Transco Compar	ontinental Gas Pipe Line ny, LLC	Project Site N	lame:	Regional Energy Access Expansion Project -CS200
Surface Water Name: Valley Creek (East)		Surface Water	r Use:	EV,MF		
			ANTIDEGRADATION – EROSIO	N AND SEDIMEI	NT CO	NTROL (E&S) PLAN
	change		ater volume, rate, and quality for st			individually or collectively <u>eliminate</u> the net luding the 2-year/24-hour storm <u>during</u> earth
	Identify	the E&S B	MP(s) that will be utilized to achieve	e the non-dischar	ge alter	native:
	☐ Alt	ternative S	iting: Location		Limitin	g Extent & Duration of Disturbance
	☐ Alt	ternative S	iting: Configuration		Riparia	an Buffer (150 ft min.)
	☐ Al	ternative S	iting: Location of Discharge		Riparia	an Forest Buffer (150 ft min.)
	☐ Ot	her:			Limite	d Disturbed Area
			&S BMP(s) will individually or collect p to and including the 2-year/24-ho			ange in stormwater volume, rate, and quality urbance activities.
	The local Therefore FERC representation for the second sec	ations of core, alternations of egulations egulations e. Therefore, rate, and ed ABACT	valve yards, compressor stations ative siting is not feasible. Limits and the required footprint need re, ABACT BMPs have been desily quality for storm events during BMPs are outlined below.	nd cost-effective. s, and tie-in pads of disturbance hed to complete the gned for the proj earth disturbance	are dictance de	or non-selection, including why none of the ctated by the alignment of the pipeline. Sen determined based on applicable k; further limiting of the LOD is not mitigate the net change in stormwater o meet anti-degradation requirements.
	either in	ndividually		nge in stormwater		MP(s) will be utilized for the project that will , rate, and quality for storm events up to and
	Identify	the ABAC	T E&S BMP(s) that will be utilized:			
	_		ction Entrance with Wash Rack			onstruction Entrance with Street Sweeping
		eel Wash				d Water Filter Bag with Compost Sock Ring
		•	er Filter Bag with Sump Pit			st Filter Sock
	☐ Coi	mpost Filte	r Berm (HQ Only)		Weight	ed Sediment Filter Tube (HQ Only)
	Silt	Fence with	n Vegetative Filter Strip		Super S	Silt Fence with Vegetative Filter Strip
	☐ Wo	od Chip Fi	ter Berm (HQ Only)		Vegeta	rive Filter Strip (HQ Only)
	☐ Sec	diment Bas	in with Perforated Riser (HQ Only)		Sedime	nt Basin with Skimmer
	☐ Sto	ne Inlet Pr	otection with Compost Layer (HQ C	Only)	Compo	st Filter Sock Sediment Trap
	☐ Em	bankment	Sediment Trap with Compost Layer	(HQ Only)	Emban	kment Sediment Trap with Compost Sock
	☐ Sec	diment Trap	with Perforated Riser (HQ Only)		Sedime	nt Trap with Skimmer
	☐ Ero	sion Contr	ol Blankets within 50 ft of Surface V	Vaters 🖂 I	lmmedi	ate Stabilization

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	☐ Flocculant with PAMs		Vegetative Conveyance					
	☐ Riparian Buffer (< 150 ft)		Riparian Forest Buffer (< 150 ft)					
	Approved Alternative:							
	Explain how the E&S BMP(s) will individually or collective for storm events up to and including the 2-year/24-hour st							
	Collectively, the ABACT BMPs specified above will re in the volume, rate and quality associated with the ea							
	ANTIDEGRADATION – POST-CONSTRUCTION	ON STORMV	/ATER MANAGEMENT (PCSM) PLAN					
	, ,							
	Identify the PCSM BMPs that will be used to achieve the	non-discharg	e alternative:					
	Alternative Siting: Location		Low Impact Development					
	☐ Alternative Siting: Configuration		Riparian Buffer (150-ft. min.)					
	☐ Alternative Siting: Location of Discharge		Riparian Forest Buffer (150-ft. min.)					
	☐ Infiltration		Water Reuse					
	Other:							
	Explain how the PCSM BMP(s) will individually or collect quality for storm events up to and including the 2-year/24. See Section 12.0 of the PCSM Plan Narratives for specific a Non-Discharge Alternative will not be utilized, ealternatives are considered environmentally sound and contained and are cost effective.	-hour storm a	ufter earth disturbance activities. Ition pertaining to each project component.					
\boxtimes	Antidegradation Best Available Combination of Techn individually or collectively manage the net change in storm the 2-year/24-hour storm after earth disturbance activities Identify the ABACT PSCM BMPs that will be utilized:	water volume						
	Rain Garden (with Infiltration)		Disconnection of Impervious / Roof Area					
	Rain Garden (without Infiltration)		Pervious Pavement with Infiltration Bed					
	☐ Constructed Filter		Infiltration Basin					
	☐ Vegetated Swale		Infiltration Bed					
			Infiltration Trench					
	☐ Constructed Wetland		Soil Amendment					
	☐ Wet Pond		Dry Well / Seepage Pit					
	☐ Dry Extended Detention Basin	\boxtimes	Infiltration Berm / Retentive Grading					
	☐ Water Quality Device	\boxtimes	Protect Sensitive / Special Value Features					
	☐ Spray / Drip Irrigation		Street Sweeping					

3800-PM-BCW0406c Rev. 6/2021 **Antidegradation Module 3** Rain Barrel ☐ Green Roof Protect / Utilize Natural Flow Pathways (on-site) Approved Alternative: Explain how the PCSM BMP(s) will individually or collectively manage the net change in stormwater volume, rate, and quality for storm events up to and including the 2-year/24-hour storm after earth disturbance activities. PCSM BMPs will be used and left in place as part of site restoration. Additional information regarding all the proposed BMPs are provided in the Post-Construction Stormwater Management Plans of respective project components (Section 3 of this Application). **CERTIFICATION** I certify under penalty of law and subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities) that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES ANTIDEGRADATION ANALYSIS MODULE 3

Applicant:		t: Transco Compan	ntinental Gas Pipe Line y, LLC	Project Site I	Name:	Regional Energy Access Expansion Project - CS515		
Surface Water Name: Shades Creek, Stony Run		Surface Water Use:		HQ-CWF,MF				
			NTIDEGRADATION – EROSION	N AND SEDIME	NT CO	NTROL (E&S) PLAN		
	chan		ter volume, rate, and quality for sto			individually or collectively <u>eliminate</u> the net eluding the 2-year/24-hour storm <u>during</u> earth		
	Ident	ify the E&S BI	MP(s) that will be utilized to achieve	the non-dischar	ge alter	native:		
		Alternative Si	ing: Location		Limitin	g Extent & Duration of Disturbance		
		Alternative Sit	ing: Configuration		Riparia	an Buffer (150 ft min.)		
		Alternative Sit	ing: Location of Discharge		Riparia	an Forest Buffer (150 ft min.)		
		Other:			Limite	d Disturbed Area		
			S BMP(s) will individually or collect to and including the 2-year/24-hou			nange in stormwater volume, rate, and quality turbance activities.		
	The I There FERO feasi volur	ocations of vefore, alterna regulations ble. Therefor me, rate, and	tive siting is not feasible. Limits of and the required footprint neede e, ABACT BMPs have been desig	and tie-in pads of disturbance d to complete t ned for the pro	have be the wor ject to	ctated by the alignment of the pipeline. een determined based on applicable k; further limiting of the LOD is not mitigate the net change in stormwater to meet anti-degradation requirements.		
	eithei	r individually c		ge in stormwater		MP(s) will be utilized for the project that will a, rate, and quality for storm events up to and		
	Ident	ify the ABACT	E&S BMP(s) that will be utilized:					
			tion Entrance with Wash Rack			onstruction Entrance with Street Sweeping		
		Wheel Wash				d Water Filter Bag with Compost Sock Ring		
		•	Filter Bag with Sump Pit		•	st Filter Sock		
		•	Berm (HQ Only)		_	ed Sediment Filter Tube (HQ Only)		
			Vegetative Filter Strip		-	Silt Fence with Vegetative Filter Strip		
	□ V	Vood Chip Filt	er Berm (HQ Only)	\boxtimes	Vegeta	tive Filter Strip (HQ Only)		
			n with Perforated Riser (HQ Only)			ent Basin with Skimmer		
			tection with Compost Layer (HQ Or		-	st Filter Sock Sediment Trap		
			Sediment Trap with Compost Layer ((HQ Only)		kment Sediment Trap with Compost Sock		
		Sediment Trap	with Perforated Riser (HQ Only)		Sedime	ent Trap with Skimmer		
	ПЕ	Erosion Contro	I Blankets within 50 ft of Surface W	aters	Immedi	ate Stabilization		

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☐ Flocculant with PAMs		Vegetative Conveyance				
Riparian Buffer (< 150 ft)		Riparian Forest Buffer (< 150 ft)				
Approved Alternative:						
Fundain how the FOC DMD(a) will individually as collectively		a not also are in atomorphism values and available				
Explain how the E&S BMP(s) will individually or collectively for storm events up to and including the 2-year/24-hour storm						
Collectively, the ABACT BMPs specified above will reta						
in the volume, rate and quality associated with the earth	h disturbar	nce.				
ANTIDEGRADATION – POST-CONSTRUCTION	STORMW	ATER MANAGEMENT (PCSM) PLAN				
A Non-Discharge Alternative will be utilized for the project that either individually or collectively eliminate the net change in stormwater volume, rate, and quality for storm events up to and including the 2-year/24-hour storm <u>after</u> earth disturbance activities.						
Identify the PCSM BMPs that will be used to achieve the no	on-discharg	e alternative:				
☐ Alternative Siting: Location		Low Impact Development				
☐ Alternative Siting: Configuration		Riparian Buffer (150-ft. min.)				
☐ Alternative Siting: Location of Discharge		Riparian Forest Buffer (150-ft. min.)				
☐ Infiltration		Water Reuse				
Other:						
Explain how the PCSM BMP(s) will individually or collecting quality for storm events up to and including the 2-year/24-ho						
See Section 12.0 of the PCSM Plan Narratives for specific						
obs decision (2.6 or ano) de minaritativas foi oposi		mon portaining to each project compension				
If a Non-Discharge Alternative will not be utilized, expalternatives are considered environmentally sound and cost		tionale for non-selection, including why none of the				
ABACT BMP's are proposed and are cost effective.						
Antidegradation Best Available Combination of Technol individually or collectively manage the net change in stormwathe 2-year/24-hour storm after earth disturbance activities.						
Identify the ABACT PSCM BMPs that will be utilized:						
Rain Garden (with Infiltration)		Disconnection of Impervious / Roof Area				
Rain Garden (without Infiltration)	_	Pervious Pavement with Infiltration Bed				
☐ Constructed Filter		Infiltration Basin				
☐ Vegetated Swale		Infiltration Bed				
		Infiltration Trench				
☐ Constructed Wetland		Soil Amendment				
☐ Wet Pond		Dry Well / Seepage Pit				
☐ Dry Extended Detention Basin	\boxtimes	Infiltration Berm / Retentive Grading				
☐ Water Quality Device	\boxtimes	Protect Sensitive / Special Value Features				
☐ Spray / Drip Irrigation		Street Sweeping				

3800-PM-BCW0406c Rev. 6/2021 **Antidegradation Module 3** Rain Barrel ☐ Green Roof Protect / Utilize Natural Flow Pathways (on-site) Approved Alternative: Explain how the PCSM BMP(s) will individually or collectively manage the net change in stormwater volume, rate, and quality for storm events up to and including the 2-year/24-hour storm after earth disturbance activities. PCSM BMPs will be used and left in place as part of site restoration. Additional information regarding all the proposed BMPs are provided in the Post-Construction Stormwater Management Plans of respective project components (Section 3 of this Application). **CERTIFICATION** I certify under penalty of law and subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities) that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES ANTIDEGRADATION ANALYSIS MODULE 3

Applicant:			Transcontinental Gas Pipe Line Company, LLC			Regional Energy Access Expansion Project - MLV-515RA20		
Surface Wa		Water Name:	ater Name: Mill Creek Tributary		er Use:	HQ-CWF,MF		
ANTIDEGRADATION – EROSION AND SEDIMENT CONTROL (E&S) PLAN								
	char		ter volume, rate, and quality for st			individually or collectively <u>eliminate</u> the net luding the 2-year/24-hour storm <u>during</u> earth		
	lden	tify the E&S B	MP(s) that will be utilized to achiev	e the non-discha	rge alter	native:		
		Alternative Si	ting: Location		Limitin	g Extent & Duration of Disturbance		
		Alternative Si	ting: Configuration		Ripari	an Buffer (150 ft min.)		
		Alternative Si	ting: Location of Discharge		Ripari	an Forest Buffer (150 ft min.)		
		Other:			Limite	d Disturbed Area		
			S BMP(s) will individually or collect to and including the 2-year/24-ho			nange in stormwater volume, rate, and quality urbance activities.		
	The Ther FER feas volu	rnatives are co locations of v refore, alterna C regulations sible. Therefor ume, rate, and	nsidered environmentally sound ar ralve yards, compressor stations tive siting is not feasible. Limits and the required footprint need e, ABACT BMPs have been desi	nd cost-effective. s, and tie-in pad of disturbance ed to complete gned for the pro	s are di have be the wor oject to	ctated by the alignment of the pipeline. een determined based on applicable k; further limiting of the LOD is not mitigate the net change in stormwater o meet anti-degradation requirements.		
	eithe	er individually o		nge in stormwate		MP(s) will be utilized for the project that will a, rate, and quality for storm events up to and		
	Iden	tify the ABACT	E&S BMP(s) that will be utilized:					
		Rock Construc	tion Entrance with Wash Rack		Rock C	onstruction Entrance with Street Sweeping		
		Wheel Wash			Pumpe	d Water Filter Bag with Compost Sock Ring		
		Pumped Wate	r Filter Bag with Sump Pit		Compo	st Filter Sock		
		Compost Filter	Berm (HQ Only)		Weight	ed Sediment Filter Tube (HQ Only)		
		Silt Fence with	Vegetative Filter Strip		Super S	Silt Fence with Vegetative Filter Strip		
		Wood Chip Fil	ter Berm (HQ Only)		Vegeta	tive Filter Strip (HQ Only)		
		Sediment Basi	n with Perforated Riser (HQ Only)		Sedime	nt Basin with Skimmer		
		Stone Inlet Pro	tection with Compost Layer (HQ C	Only)	Compo	st Filter Sock Sediment Trap		
		Embankment S	Sediment Trap with Compost Layer	(HQ Only)	Emban	kment Sediment Trap with Compost Sock		
		Sediment Trap	with Perforated Riser (HQ Only)		Sedime	nt Trap with Skimmer		
	\boxtimes	Erosion Contro	ol Blankets within 50 ft of Surface V	Vaters 🖂	Immed	ate Stabilization		

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	☐ Flocculant with PAMs		Vegetative Conveyance				
	Riparian Buffer (< 150 ft)		Riparian Forest Buffer (< 150 ft)				
	Approved Alternative:						
	Evoleia have the ESC DMD(a) will individually as collectively	, managa th	a not about a in atomorphism values and available				
	Explain how the E&S BMP(s) will individually or collectively for storm events up to and including the 2-year/24-hour sto						
	Collectively, the ABACT BMPs specified above will retain						
	in the volume, rate and quality associated with the eart	in disturbar	nce.				
	ANTIDEGRADATION – POST-CONSTRUCTION	STORMW	ATER MANAGEMENT (PCSM) PLAN				
	A Non-Discharge Alternative will be utilized for the project that either individually or collectively eliminate the net change in stormwater volume, rate, and quality for storm events up to and including the 2-year/24-hour storm <u>after</u> earth disturbance activities.						
	Identify the PCSM BMPs that will be used to achieve the no	on-discharg	e alternative:				
	☐ Alternative Siting: Location		Low Impact Development				
	☐ Alternative Siting: Configuration		Riparian Buffer (150-ft. min.)				
	☐ Alternative Siting: Location of Discharge		Riparian Forest Buffer (150-ft. min.)				
	☐ Infiltration		Water Reuse				
	Other:						
	Explain how the PCSM BMP(s) will individually or collecting quality for storm events up to and including the 2-year/24-h						
	See Section 12.0 of the PCSM Plan Narratives for speci	_					
	occ occion 12.0 of the Foom Figure Randing for Specia		nion pertaining to each project component.				
	If a Non-Discharge Alternative will not be utilized, expalternatives are considered environmentally sound and cos		tionale for non-selection, including why none of the				
	ABACT BMP's are proposed and are cost effective.						
\boxtimes	Antidegradation Best Available Combination of Technol	logies (ABA	ACT) has been selected for the project that will either				
	individually or collectively <u>manage</u> the net change in stormw the 2-year/24-hour storm <u>after</u> earth disturbance activities.						
	Identify the ABACT PSCM BMPs that will be utilized:						
	Rain Garden (with Infiltration)		Disconnection of Impervious / Roof Area				
	Rain Garden (without Infiltration)		Pervious Pavement with Infiltration Bed				
	☐ Constructed Filter		Infiltration Basin				
	☐ Vegetated Swale		Infiltration Bed				
	☐ Vegetated Filter Strip		Infiltration Trench				
	☐ Constructed Wetland		Soil Amendment				
	☐ Wet Pond		Dry Well / Seepage Pit				
	☐ Dry Extended Detention Basin	\boxtimes	Infiltration Berm / Retentive Grading				
	☐ Water Quality Device	\boxtimes	Protect Sensitive / Special Value Features				
	☐ Spray / Drip Irrigation		Street Sweeping				

3800-PM-BCW0406c Rev. 6/2021 **Antidegradation Module 3** Rain Barrel ☐ Green Roof Protect / Utilize Natural Flow Pathways (on-site) Approved Alternative: Explain how the PCSM BMP(s) will individually or collectively manage the net change in stormwater volume, rate, and quality for storm events up to and including the 2-year/24-hour storm after earth disturbance activities. PCSM BMPs will be used and left in place as part of site restoration. Additional information regarding all the proposed BMPs are provided in the Post-Construction Stormwater Management Plans of respective project components (Section 3 of this Application). **CERTIFICATION** I certify under penalty of law and subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities) that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES ANTIDEGRADATION ANALYSIS MODULE 3

Applicant:			Transcontinental Gas Pipe Line F Company, LLC			Regional Energy Access Expansion Project - MLV-505LD86		
Surface Wa		Water Name:	ater Name: Sugar Hollow Creek		er Use:	HQ-CWF,MF		
ANTIDEGRADATION – EROSION AND SEDIMENT CONTROL (E&S) PLAN								
	chai		ater volume, rate, and quality for st			individually or collectively <u>eliminate</u> the net luding the 2-year/24-hour storm <u>during</u> earth		
	Ider	ntify the E&S B	MP(s) that will be utilized to achiev	e the non-discha	rge alter	native:		
		Alternative Si	ting: Location		Limitin	g Extent & Duration of Disturbance		
		Alternative Si	ting: Configuration		Riparia	an Buffer (150 ft min.)		
		Alternative Si	ting: Location of Discharge		Riparia	an Forest Buffer (150 ft min.)		
		Other:			Limite	d Disturbed Area		
			&S BMP(s) will individually or collect to and including the 2-year/24-ho			nange in stormwater volume, rate, and quality curbance activities.		
	The The FER feas	rnatives are co locations of verefore, alterna RC regulations sible. Thereforume, rate, and	nsidered environmentally sound ar valve yards, compressor stations ative siting is not feasible. Limits and the required footprint need re, ABACT BMPs have been desi	nd cost-effective. s, and tie-in pad of disturbance ed to complete gned for the pro	s are die have be the wor oject to	ctated by the alignment of the pipeline. een determined based on applicable k; further limiting of the LOD is not mitigate the net change in stormwater to meet anti-degradation requirements.		
	eithe	er individually o		nge in stormwate		MP(s) will be utilized for the project that will e, rate, and quality for storm events up to and		
	Ider	ntify the ABACT	ΓE&S BMP(s) that will be utilized:					
			ction Entrance with Wash Rack			onstruction Entrance with Street Sweeping		
		Wheel Wash			-	d Water Filter Bag with Compost Sock Ring		
		Pumped Wate	r Filter Bag with Sump Pit		Compo	st Filter Sock		
		Compost Filte	r Berm (HQ Only)		_	ed Sediment Filter Tube (HQ Only)		
		Silt Fence with	Negetative Filter Strip		Super S	Silt Fence with Vegetative Filter Strip		
		Wood Chip Fil	ter Berm (HQ Only)		Vegeta	tive Filter Strip (HQ Only)		
		Sediment Bas	in with Perforated Riser (HQ Only)		Sedime	ent Basin with Skimmer		
	\boxtimes	Stone Inlet Pro	otection with Compost Layer (HQ C	Only)	Compo	st Filter Sock Sediment Trap		
		Embankment	Sediment Trap with Compost Layer	(HQ Only)	Emban	kment Sediment Trap with Compost Sock		
		Sediment Trap	with Perforated Riser (HQ Only)		Sedime	ent Trap with Skimmer		
		Erosion Contro	ol Blankets within 50 ft of Surface V	Vaters 🖂	Immedi	ate Stabilization		

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	☐ Flocculant with PAMs	\boxtimes	Vegetative Conveyance			
	Riparian Buffer (< 150 ft)		Riparian Forest Buffer (< 150 ft)			
	Approved Alternative:					
		plain how the E&S BMP(s) will individually or collectively <u>manage</u> the net change in stormwater volume, rate, and quality storm events up to and including the 2-year/24-hour storm <u>during</u> the earth disturbance activities.				
	Collectively, the ABACT BMPs specified above will retain an					
	in the volume, rate and quality associated with the earth dis	turba	nce.			
	ANTIDEGRADATION – POST-CONSTRUCTION STO		, ,			
	A Non-Discharge Alternative will be utilized for the project that either individually or collectively eliminate the net change in stormwater volume, rate, and quality for storm events up to and including the 2-year/24-hour storm <u>after</u> earth disturbance activities.					
	Identify the PCSM BMPs that will be used to achieve the non-dis	charg	ge alternative:			
	☐ Alternative Siting: Location		Low Impact Development			
	☐ Alternative Siting: Configuration		Riparian Buffer (150-ft. min.)			
	☐ Alternative Siting: Location of Discharge		Riparian Forest Buffer (150-ft. min.)			
	☐ Infiltration		Water Reuse			
	Other:					
	Explain how the PCSM BMP(s) will individually or collectively <u>eliminate</u> the net change in stormwater volume, rate, and quality for storm events up to and including the 2-year/24-hour storm <u>after</u> earth disturbance activities.					
	See Section 12.0 of the PCSM Plan Narratives for specific information pertaining to each project component.					
	obb coolion 1210 or the room rian rian value for opcome in		ation portuning to odon project compension			
	If a Non-Discharge Alternative will not be utilized , explain the rationale for non-selection, including why none of the alternatives are considered environmentally sound and cost-effective.					
	ABACT BMP's are proposed and are cost effective.					
	•					
\boxtimes	Antidegradation Best Available Combination of Technologies (ABACT) has been selected for the project that will either individually or collectively manage the net change in stormwater volume, rate, and quality for storm events up to and including the 2-year/24-hour storm after earth disturbance activities.					
	Identify the ABACT PSCM BMPs that will be utilized:					
	Rain Garden (with Infiltration)		Disconnection of Impervious / Roof Area			
	Rain Garden (without Infiltration)		Pervious Pavement with Infiltration Bed			
	☐ Constructed Filter		Infiltration Basin			
	☐ Vegetated Swale		Infiltration Bed			
	☐ Vegetated Filter Strip		Infiltration Trench			
	☐ Constructed Wetland		Soil Amendment			
	☐ Wet Pond		Dry Well / Seepage Pit			
	☐ Dry Extended Detention Basin	\boxtimes	Infiltration Berm / Retentive Grading			
	☐ Water Quality Device	\boxtimes	Protect Sensitive / Special Value Features			
	☐ Spray / Drip Irrigation		Street Sweeping			

3800-PM-BCW0406c Rev. 6/2021 **Antidegradation Module 3** Rain Barrel ☐ Green Roof Protect / Utilize Natural Flow Pathways (on-site) Approved Alternative: Explain how the PCSM BMP(s) will individually or collectively manage the net change in stormwater volume, rate, and quality for storm events up to and including the 2-year/24-hour storm after earth disturbance activities. PCSM BMPs will be used and left in place as part of site restoration. Additional information regarding all the proposed BMPs are provided in the Post-Construction Stormwater Management Plans of respective project components (Section 3 of this Application). **CERTIFICATION** I certify under penalty of law and subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities) that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Applicant Name (type or print legibly)

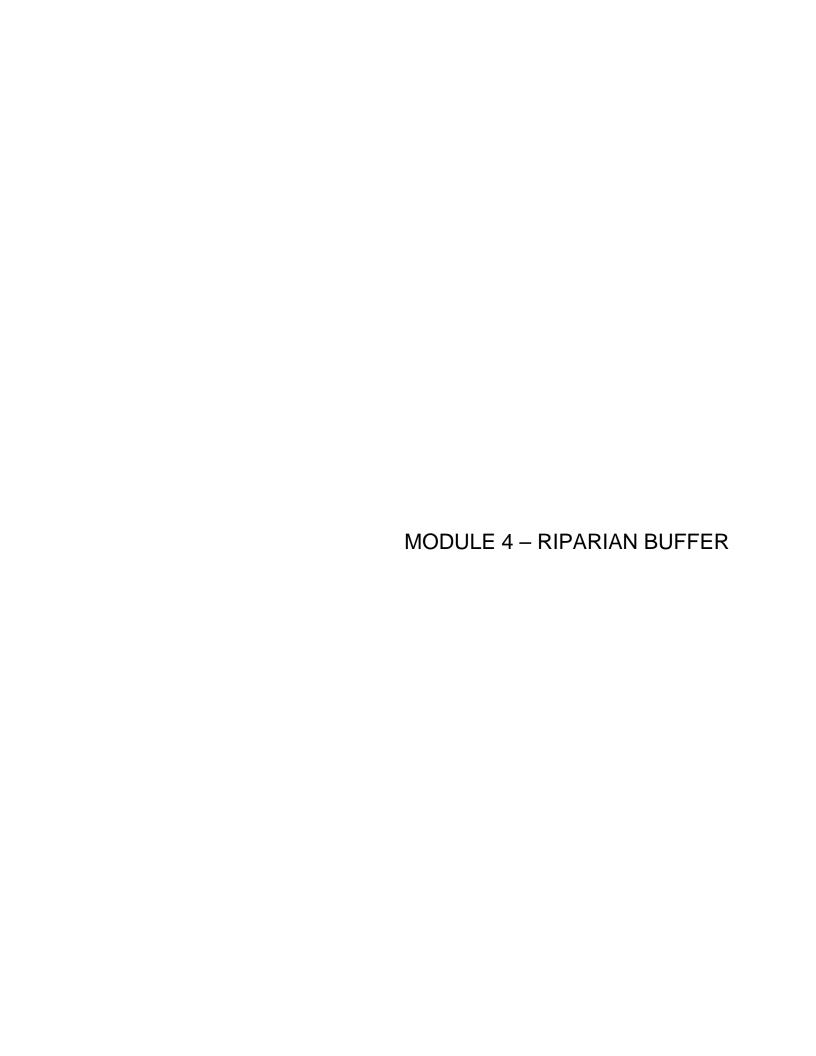
March 7, 2022

Applicant Signature

Manager - Permitting

March 7, 2022

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3800-PM-BCW0406d 12/2019 Riparian Buffer Module 4 COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

Riparian Buffer Module 4 pennsylvania DEPARTMENT OF ENVIRONMENTAL PROTECTION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES RIPARIAN BUFFER MODULE 4

Арр	olicant:	Transconti Company,	nental Gas Pipe Line LLC	Project Site Name:	Regional Energy Access Expansion Project - Regional Energy Lateral, Effort Loop, Mainline A Regulator (Mod 4 applicable only to these Project components)	
Sur	face Wate	er Name(s):	See Attachment 1.1-1	Surface Water Use(s)	See Attachment 1.1-1	
APPLICABILITY INFORMATION						
Permit Type:						
Check the appropriate box if the project is characterized by any of the following exceptions in 25 Pa. Code § 102.14(d)(1):						
	Road maintenance activities where any existing riparian buffer will be undisturbed to the extent practicable.					
	Repair and maintenance of existing pipelines and utilities where any existing buffer will be undisturbed to the extent practicable.					
	Oil and gas, timber harvesting, or mining activities for which site reclamation or restoration is part of the permit authorization in Chapters 78, 86-90 and 102 where any existing buffer will be undisturbed to the extent practicable.					
			e that is not part of a larger cor vember 19, 2010.	nmon plan of development	or sale and the parcel was acquired by the	
		es authorized ese setback re		gulations which contain se	tback requirements and the activity complies	
Check the appropriate box if the project is characterized by any of the following allowed or allowable activities in 25 Pa. Code §§ 102.14(f)(2) and (3):						
	Activities or practices used to maintain the riparian buffer including the disturbance of existing vegetation, and tree and shrub removal, as needed to allow for natural succession of native vegetation and protection of public health and safety.					
	Timber	Timber harvesting activities in accordance with the riparian forest buffer management plan as part of the PCSM Plan.			gement plan as part of the PCSM Plan.	
	Passive or low impact recreational activities so long as the functioning of the riparian buffer is mainta		iparian buffer is maintained.			
	Emergency response and other similar activities.					
	Resear	ch and data o	collection activities, which may	include water quality monite	oring and stream gauging.	
\boxtimes		iction or place ithorized by [storm drainage, utilities or o	other structures that has been or is expected	
\boxtimes	Water o	bstructions o	or encroachments that have been	en or are expected to be au	uthorized by DEP.	
	Restora	tion projects	that have been or are expected	d to be authorized by DEP.		
RIPARIAN BUFFER OR RIPARIAN FOREST BUFFER INFORMATION						
1.			activities occur within 150 feet ligh Quality Waters (HQ) or Ex		nt stream, creek, lake, pond or reservoir with /)?	
		☐ No				
		question #1, 32 of 2014:	identify the option selected by	the applicant to meet the i	requirements of 25 Pa. Code § 102.14(a)(1)	
	☐ A 15	0-foot (min.)	riparian buffer or riparian forest	buffer will be implemented	l (Individual NPDES Permits Only).	
	☐ An e	quivalency de	emonstration will be conducted	(Individual NPDES Permit	s Only).	
		icant is seeki	ng a waiver (E&S Permits Only	′).		
2.					ek, lake, pond or reservoir with a designated he use is not being attained (i.e., water is	

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	impaired)?			
	☐ Yes No			
	If Yes to question #2, identify the option selected by the applicant to meet the requirements of 25 Pa. Code § 102.14(a)(2) or Act 162 of 2014:			
	☐ A 150-foot (min.) riparian forest buffer will be implemented (maintained, converted or established).			
	☐ An equivalency demonstration to a riparian forest buffer will be conducted (Individual NPDES Permits Only).			
	Applicant is seeking a waiver (E&S Permits Only).			
3.	Species that will be planted:			
4.	Average minimum widths: Zone 1: ft Zone 2: ft			
5.	Buffer linear length: ft			
6.	A riparian forest buffer management plan has been included in the PCSM Plan for the project.			
7.	The buffer will be protected in perpetuity by: Deed restriction Conservation easement			
	☐ Other:			
	EQUIVALENCY DEMONSTRATION			
	Worksheets 12 and 13 from DEP's Pennsylvania Stormwater BMP Manual (363-0300-002) and Worksheets 14 and 15 from DEP's Riparian Buffer or Riparian Forest Buffer Equivalency Demonstration (310-2135-002) have been completed and are attached to this module and demonstrate that proposed PCSM BMPs will provide equivalent or better pollutant load reductions as a riparian buffer or riparian forest buffer.			
	The Checklist for Functional Equivalency of Riparian Buffers and Riparian Forest Buffers as contained in DEP's Riparian Buffer or Riparian Forest Buffer Equivalency Demonstration (310-2135-002) is attached to this module.			
	Will there be any earth disturbance within 100 feet of a surface water (as defined in 25 Pa. Code § 102.1)?			
	☐ Yes ☐ No			
	If Yes, complete the Riparian Forest Buffer Offset Information section. If No, skip to the Certification section.			
RIPARIAN FOREST BUFFER OFFSET INFORMATION				
1.	Area that must be offset (show on PCSM Plan Drawing): N/A acre(s)			
2.	Proposed offset area (show on PCSM Plan Drawing): acre(s)			
3.	Ch. 93 Drainage List of Project Site Waters:			
4.	Ch. 93 Drainage List of Offset Site Waters: Name of Offset Site Waters:			
5.	Offset Property Owner Name and Address:			
	Authorization to implement a new riparian forest buffer at the offset site has been provided and is attached.			
	A Plan showing the location of the offset site and the buffer extent and an implementation plan are attached.			
6.	Species that will be planted:			
7.	Average minimum widths: Zone 1: ft Zone 2: ft			
8.	Buffer linear length: ft			
9.	A riparian forest buffer management plan has been included in the PCSM Plan for the project.			
10.	The buffer will be protected in perpetuity by: Deed restriction Conservation easement			
	☐ Other:			

WAIVER INFORMATION					
1. The project qualifies for the following waive	r(s) under 25 Pa. Code § 102.14(d)(2):				
The project is necessary to abate a subsection	The project is necessary to abate a substantial threat to public health or safety.				
	☐ The project is a linear project including pipelines, public roadways, rail lines or utility lines.				
☐ The project is an abandoned mine recla	The project is an abandoned mine reclamation activity that will be conducted under a DEP authorization or permit.				
	The project is a redevelopment project which may include brownfields or use of other vacant land and property within a developed area for further construction or development.				
Compliance with 25 Pa. Code §§ 102. structures at the project site.	14(a) or (b) is not appropriate or feasible due to site characteristics or existing				
2. An alternatives analysis is attached.	Section 1.7 includes a discussion of routing and neckdown. A detailed discussion on alternatives is provided in Chapter 105 permit applications.				
3. Existing riparian buffers will be preserv	ed to the extent practicable.				
CERTIFICATION					
I certify under penalty of law and subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities) that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.					
Jacob Dana					
Joseph Dean Applicant Name (type or print legibly)	Manager- Permitting Official Title				
Oseph					
Applicant Signature	Date Signed				