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Erosion & Sediment Control Plan and Site Restoration Plan Narrative

Atlantic Sunrise Project

Temporary and Permanent Access Roads
Lenox Township
Susquehanna County
Pennsylvania

Prepared For:

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC

2800 Post Oak Blvd
Houston, TX, 77251

Issued: August 2015
Revised December 2015, January 2016, March 2016, April 2016, October 2016, ***August 2017***
BL Project No. 14C4909

Prepared By:

BL Companies
4242 Carlisle Pike, Suite 260
Camp Hill, PA 17011

Suzanne King, PE
P.E. 082757

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APPENDIX E

AR-SU-041 Specific Narrative and Calculations

E.1 Site Specific Narrative
- a. Narrative
- b. TMDL Discussion
- c. Minimized Soil Compaction
- d. Thermal Impact Analysis
- e. Acidic Soil Management Plan
- f. Road Specific Construction Sequence
- g. Worksheet 1. General Site Information

E.2 Location Map

E.3 Sediment Barrier Table
- a. E&S Worksheet 1

E.1 Site Specific Narrative

a. Narrative
b. TMDL Discussion
c. Minimized Soil Compaction
d. Thermal Impact Analysis
e. Acidic Soil Management Plan
f. Road Specific Construction Sequence
g. Worksheet 1. General Site Information

ACCESS ROAD: AR-SU-041

ACT 167 PLAN: None

TMDL: None

NARRATIVE:

AR-SU-041 is a proposed permanent access road (PAR) located in Lenox Township, Susquehanna County, Pennsylvania. The intent of this PAR is to provide temporary construction access and permanent maintenance and operational access to the proposed 30" Central Penn Line North Pipeline right-of-way. The improvements described below will be installed temporarily and will be utilized during the construction process. Upon completion of the construction activities, the disturbed areas will be restored to pre-construction conditions (existing dirt road) and a permanent easement will be recorded along the restored access road corridor to provide maintenance and operational access to the.

The PAR begins at Station Hill Road and terminates at the pipeline right-of-way at approximate mile post 50.7. The PAR is approximately 2,060 feet long. Grading of the access road from Sta 20+11 to Sta 20+42 is necessary to meet PennDOT driveway grading requirements. For 1,550 feet the road follows an existing drive, no improvements are proposed over this portion of the road. The remaining 480 feet of road is to be new temporary construction over an existing dirt road

Compost filter socks have been proposed to clean runoff leaving the area disturbed due to construction of the PAR and subsequent restoration. A temporary rock construction entrance with compost filter sock is proposed where the PAR diverts from the existing driveway.

TMDL DISCUSSION:

The watershed and sub-basin where this road is located as well as the nearest surface waters to receive runoff from this road, are not subject to TMDL restrictions.

MINIMIZED SOIL COMPACTION:

The Project seeks to minimize soils compaction impacts associated with access roads to the maximum extent practicable. AR-SU-041 is a proposed permanent access road. construction and operations traffic will utilize the proposed road. The permanent access road utilizes 1,550 feet of existing road reducing the area of impact. The roadway width has also been minimized to 14 feet. Temporary construction over undisturbed land will be restored with native topsoil to enhance the revegetation process.

THERMAL IMPACT ANALYSIS:

Thermal impacts associated with AR-SU-041 will be avoided to the maximum extent practicable. The following measures have been implemented to minimize thermal impacts:

- AR-SU-041 is approximately 2,060 linear feet; however, it follows an existing gravel road for approximately 1,550 linear feet. No improvements are necessary to use the existing gravel road. Utilizing the existing gravel road minimizes the potential thermal impact of this road.

- The use of an existing road corridor eliminates the need for additional tree removal. The ability to use this road without the removal of additional trees acts to minimize the thermal impact of this road.

- During the construction phase of this project compost filter socks will be placed downgradient of the proposed access road. The compost filter socks will promote infiltration of runoff from the proposed temporary impervious surfaces. Infiltration of runoff prior to entering of receiving waters allows for runoff to assimilate to ground water temperatures which are minimally influenced by seasonal temperature changes, minimizing the thermal impact of this road.

- The proposed gravel surfacing is temporary and the disturbed areas will be restored to pre-development conditions upon completion of the construction of the pipeline. There are no new permanent impervious surfaces as a result of the use of this road. Therefore, there are no permanent thermal impacts as a result of the use of this road for the construction and maintenance of the pipeline.

ACIDIC SOIL MANAGEMENT PLAN:

AR-SU-041 Soil Acidity Table		
Soil Map Symbol	Soil Name	pH
MoB2	Morris channery silt loam, 3 to 8 percent slopes, eroded	5.4
McB2	Mardin channery silt loam, 3 to 8 percent slopes, eroded	5.4
LkB2	Lordstown and Oquaga channery silt loams, 3 to 12 percent slopes, moderatly eroded	5.4
MgD	Mardin channery silt loam, 8 to 25 percent slopes, very stony	5.4
NcB	Norwich and Chippewa channery silt loames, 3 to 8 percent slopes	5.7
LsF	Lordstown and Oquaga very stony silt loams, 30 to 70 percent slopes	5.5
VsB	Hatboro-Codorus complex, 0 to 3 percent slopes, flooded	6.0
Hw	Hatboro-Codorus complex, 0 to 3 percent slopes, flooded	5.9

An Acid Producing Soils Control Plan is included as part of this application. The plan identifies the measures to be used to control pollution associated with construction of access roads that contain acid-producing soils. The plan requires that these measures be applied only for soils with a pH less than 4.0 as recommended by the Natural Resources Conservation Service (NRCS). The table above depicts the soil types present on this road as well as the acidity of the soils. The pH of the soils on this road are outside the threshold established by the Acid Producing Soils Control Plan; therefore, the measures prescribed in the plan do not need to be implemented for this road.

105 PERMIT COORDINATION:

The calculation of fill volumes provided within the Chapter 105 Application is based on the extent of the access road LOD within the floodplain/floodway to account for worst-case field scenarios requiring the addition of a one foot-depth of gravel for maintenance and/or minor access road widening for improved access. As such, the fill volume is an overestimation and does not reflect the actual volume of fill required by the current access road design, as presented within the Chapter 102 Permit. The inclusion of the overestimated fill volumes within the Chapter 105 Application limits future revisions to the Chapter 105 Application due to minor field adjustments; conversely, revisions to access road design after the 102 Permit issuance will be coordinated with PADEP/CCD.

ROAD SPECIFIC CONSTRUCTION SEQUENCE:
ACCESS ROAD: AR-SU-041

1. At least 7 days prior to starting earth disturbance activities, including clearing and grubbing, the owner and/or operator shall invite contractors, Environmental Inspectors, the landowner, appropriate municipal officials, the E&S plan preparer, the PCSM plan preparer, the licensed professional responsible for oversight of critical stages of implementation of the PCSM plan, and a representative from the local conservation district to an on-site preconstruction meeting.

2. At least 3 days prior to starting earth disturbance activities, or expanding into an area previously unmarked, the Pennsylvania One Call System Inc. shall be notified at 1-800-242-1776 for the location of existing underground utilities.

3. Hold pre-construction conference with the Environmental Inspectors, local County Conservation District (CCD), PADEP, and Design Engineer.

4. Survey crews locate and stake special areas of concern (e.g., wetlands, streams, culverts, other utilities, etc.), edge of proposed access road, and field locate the limit of disturbance.

5. Install orange construction fence around areas to be preserved.

6. Locate staging areas and access points including rock construction entrance. Install compost filter sock down slope of this area.

7. Perform tree cutting where required. (Areas with tree cutting will be restored to meadow in good condition.)

8. Install rock construction entrance.

9. Install timber matting over culverts at locations noted on plans.

10. Remove brush to effectively install compost filter sock, level side cuts to grant access for vehicles and workers to safely perform the installation of compost filter sock.

11. Install compost filter sock as depicted on the E&SC Drawings.

12. Apply stabilization measures immediately to disturbed areas due to the initial clearing and installation of compost filter sock.

13. The Compliance Manager shall provide PADEP at least three days' notice prior to bulk earth disturbance and upon completed installation of compost filter sock.

14. If applicable, install security fence. The necessity of a security fence will be at the discretion of the Contractor.

15. Proceed with major clearing and grubbing.

16. Begin construction staking for layout of access road.

17. Begin grading and strip and stockpile topsoil; install compost filter sock around stockpiles. Soil stockpile areas to support the access roads shall be located within the area of minimum disturbance/reduced grading for the same access road that the topsoil was stripped, or within the pipeline ROW. Stockpiled soil shall not exceed 35 feet in height, have maximum side slopes of 2:1, and be surrounded by 12” compost filter sock. existing excavated material that is not to be reused in the work area is to be immediately removed from the site and properly disposed of at an approved facility or permitted waste area.

18. Grade the access road as shown on the E&SC Plans. (Section 2 of the ESCGP-2 NOI).

19. Add AASHTO #57 stone to the portion of the existing road to remain in areas where existing gravel is thinning or bare to create a uniform travel surface. Continue adding AASHTO #57 stone to rutted or thinning areas as necessary during active use of the access road.

20. Immediately stabilize the access road with geotextile and gravel surfacing where indicated in the E&SC Plans.

21. Upon temporary cessation of an earth disturbance activity or stage of an activity where the cessation of earth disturbance activities will exceed four days, disturbed areas shall be immediately seeded, mulched, or otherwise protected from accelerated erosion and sedimentation pending future earth disturbance activities. For an earth disturbance activity or stage of an activity to be considered temporarily stabilized, the disturbed areas shall be covered by a minimum uniform coverage of mulch and seed, with a density capable of resisting accelerated erosion and sedimentation which temporarily minimizes accelerated erosion and sedimentation. Temporary stabilization will not occur on active vehicular travel ways within the right of way. The on-site environmental inspector will log daily activity within the limits of disturbance and notify the Contractor of areas requiring temporary stabilization (i.e., areas where work has ceased for at least four days).

22. Once the temporary improvements to the permanent access road are no longer necessary, remove gravel and geotextile fabric from the temporarily improved portions of the road and dispose of the materials at a suitable disposal or recycling site, in compliance with local, state, and federal regulations.

23. Loosen and de-compact topsoil throughout the temporarily improved section of the access road. Replace stockpiled topsoil and grade the disturbed areas to match preconstruction conditions. Immediately fertilize, seed and stabilize areas at finished grade. Maintain compost filter sock until access road work is complete and uniform 70% perennial vegetative cover is established.

24. Upon completion of earth disturbance activities and permanent stabilization of disturbed areas, the Owner shall contact the local CCD for an inspection prior to the removal of the compost filter sock. Vegetated areas must achieve a minimum uniform 70% perennial cover over the entire disturbed area to be considered stabilized. Roadways and parking areas should have at least a clean subbase in place to be considered stabilized. In agricultural use areas, an area shall be considered to have achieved final stabilization if the above conditions are met or if an area exhibits any ground cover conditions normally associated with active agricultural practices, including but not limited to bare earth on cultivated land, temporary vegetative cover on cultivated land, or pasture not meeting a minimum uniform 70% perennial vegetative cover.

25. Upon local CCD and Transco approval of stabilization and re-vegetation, either:

    a. Leave the compost filter sock in place, cut open the mesh, and spread the mulch as a soil supplement; or

    b. Remove the compost filter sock, stabilize areas disturbed by removal, and properly dispose/recycle the compost filter sock.

26. Remove orange construction fencing and security fence.

27. Upon completion of earth disturbance activities, removal of compost filter sock and permanent stabilization of disturbed areas, the Owner shall contact the local CCD for a final inspection.

Worksheet 1. General Site Information

INSTRUCTIONS: Fill out Worksheet 1 for each watershed

Date: 3/23/2015, ***revised 3/02/2016***

Project Name: Atlantic Sunrise Pipeline AR-SU-041

Municipality: Lenox Township

County: Susquehanna

Total Area (acres): ***1.92***

Major River Basin: Susquehanna River

http://www.dep.state.pa.us/dep/depupdate/watermgt/wc/default.htm#newtopics

Watershed: Tunkhannock Creek

Sub-Basin: Upper Susquehanna River

Nearest Surface Water(s) to Receive Runoff: UNT to Millard Creek

Chapter 93 - Designated Water Use: CWF,MF

http://www.pacode.com/secure/data/025/chapter93/chap93toc.html

Impaired according to Chapter 303(d) List?

http://www.dep.state.pa.us/dep/deputate/watermgt/wqp/wqstandards/303d-Report.htm

Yes	
No	X

List Causes of Impairment:

Is project subject to, or part of:

Municipal Separate Storm Sewer System (MS4) Requirements?

http://www.dep.state.pa.us/dep/deputate/watermgt/wc/Subjects/StormwaterManagement/GeneralPermits/default.htm

Yes	
No	X

Existing or planned drinking water supply?

Yes	
No	X

If yes, distance from proposed discharge (miles):

Approved Act 167 Plan?

http://www.dep.state.pa.us/dep/deputate/watermgt/wc/Subjects/StormwaterManagement/Approved_1.html

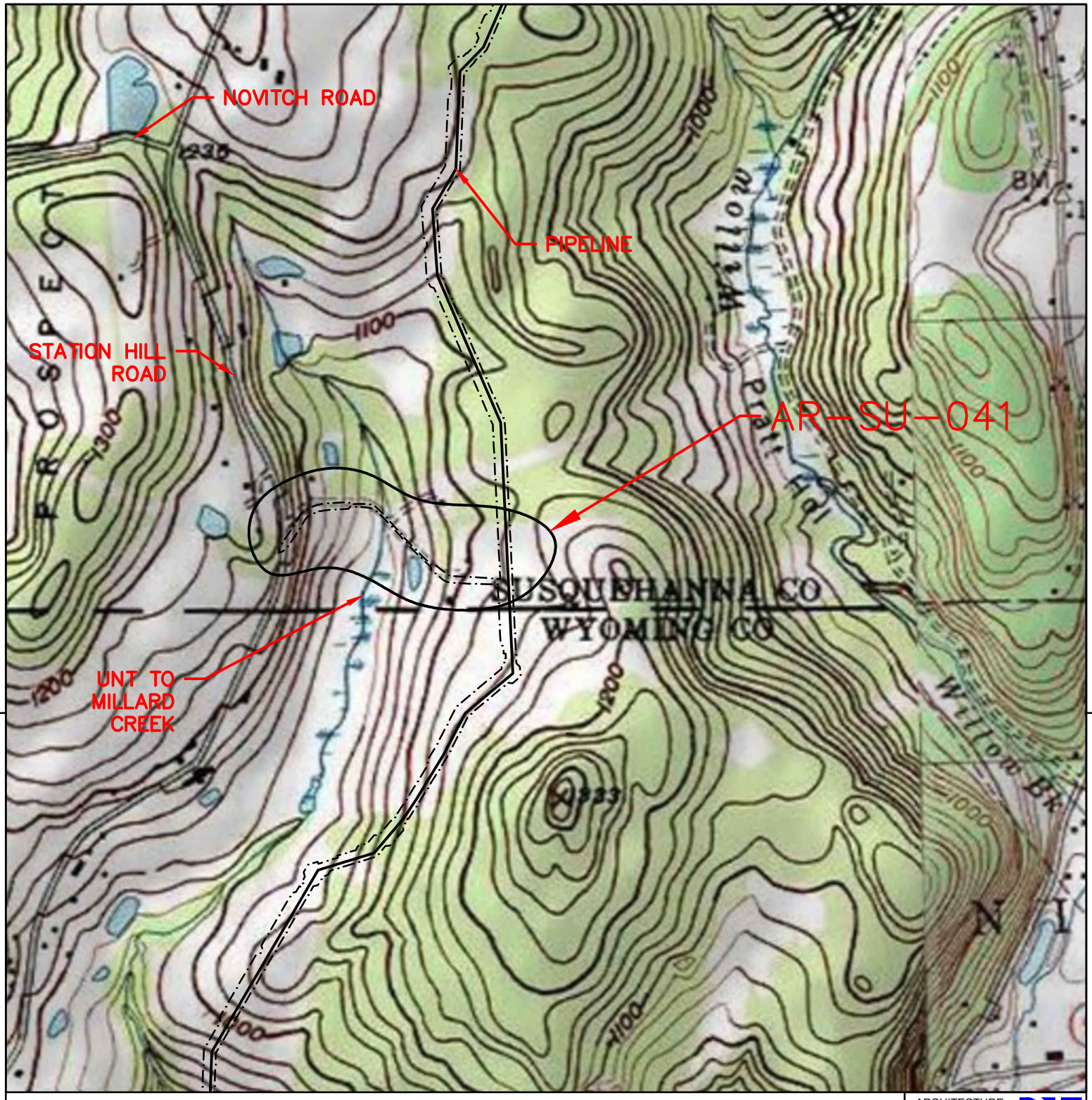
Yes	
No	X

Existing River Conservation Plan?

http://www.dcnr.state.pa.us/brc/rivers/riversconservation/planningprojects/

Yes	X
No	

E.2 Location Map



HOP BOTTOM QUADRANGLE

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING
BL Companies

N

GRAPHIC SCALE
1,000 500 0 1,000
SCALE IN FEET

ATLANTIC SUNRISE

PROPOSED 30" NATURAL GAS PIPELINE

USGS LOCATION MAP
TEMPORARY AR-SU-041
LENOX TOWNSHIP
SUSQUEHANNA COUNTY, PENNSYLVANIA

Williams

NO.	DATE	BY	REVISION DESCRIPTION	W.O. NO.	CHK.	APP.
				1161481		

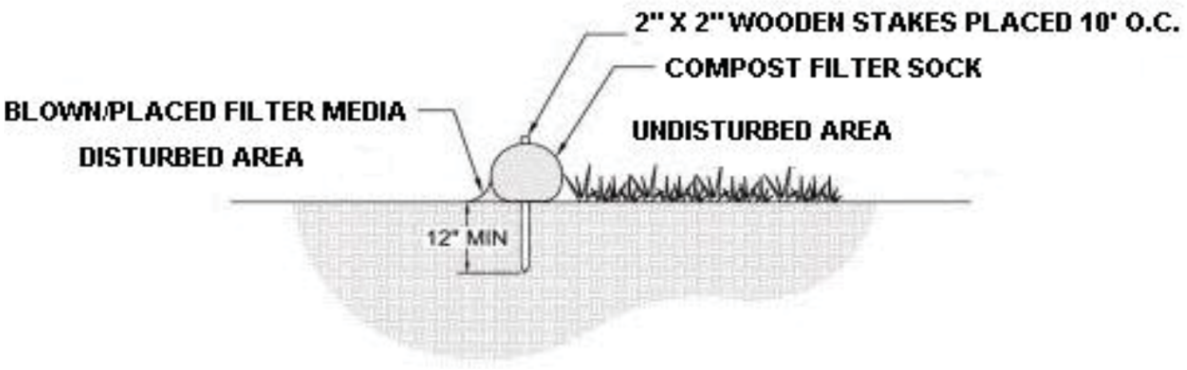
DRAWN BY: CLM	DATE: 11/11/15	ISSUED FOR BID:	SCALE: 1"=1,000'
CHECKED BY:	DATE:	ISSUED FOR CONSTRUCTION:	
APPROVED BY:	DATE:	DRAWING NUMBER: 24-1601-70-28-A/ 1683_3-AR-SU-041	SHEET 1 OF 1
WO: 1161481			

E.*3* Sediment Barrier Table

a. E&S Worksheet 1

E&S WORKSHEET #1
Compost Filter Sock

PROJECT NAME: Atlantic Sunrise
LOCATION: AR-SU-041
PREPARED BY: JMS, *OLC, RMR* DATE: 5/11/15, Rev. 9/27/16, Rev.11/19/16
CHECKED BY: BJP, SMK DATE: 5/11/15, Rev. 9/27/16, Rev. 11/19/16



SOCK NO.	Dia. In.	LOCATION	SLOPE PERCENT	SLOPE LENGTH ABOVE BARRIER (FT)	SOCK LENGTH
1-8	18	STA 0+75 to STA 6+00	7	287	125
9-13	12	STA 6+50 to STA 8+25	1	5	765
14-15	***12***	***STA 19+95 to STA 20+45***	***20***	***50***	***65***
STOCKPILE					
SP 1	12	STA 4+85 to STA 5+05	2:1 (MAX)	25 (MAX)	160

SOURCE: Pennsylvania Erosion and Sediment Pollution Control Manual, Page 372