



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Tuesday, September 17, 2019
WELL WORK PERMIT
Vertical / Re-Work

DOMINION ENERGY TRANSMISSION, INC.
925 WHITE OAKS BOULEVARD

BRIDGEPORT, WV 26330

Re: Permit approval for 8151
47-033-01594-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.



James A. Martin
Chief

Operator's Well Number: 8151
Farm Name: DAVIS, DONNA LEE
U.S. WELL NUMBER: 47-033-01594-00-00
Vertical Re-Work
Date Issued: 9/17/2019

PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours
7. Well work activities shall not constitute a hazard to the safety of persons.
8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

WW - 2B
(Rev. 8/10)

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION**

1) Well Operator: Dominion Energy Transmission, Inc. 307048 Harrison Union West Milford
Operator ID County District Quadrangle

2) Operator's Well Number: 8151 3) Elevation: 1128'

4) Well Type: (a) Oil _____ or Gas X
(b) If Gas: Production X / Underground Storage X
Deep _____ / Shallow X

5) Proposed Target Formation(s): Gantz Proposed Target Depth: 1935'

6) Proposed Total Depth: 1930' Feet Formation at Proposed Total Depth: Gantz

7) Approximate fresh water strata depths: N/A

8) Approximate salt water depths: N/A

9) Approximate coal seam depths: N/A

*SDW
5/6/2019*

10) Approximate void depths, (coal, Karst, other): N/A

11) Does land contain coal seams tributary to active mine? No

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)
Please see attached work plan. CONVERT TO OBSERVATION WELL FOR GANTZ.

13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE	INTERVALS	CEMENT
	Size	Grade	Weight per ft			
Conductor						
Fresh Water	10-3/4"	N/A	N/A	N/A	170'	N/A
Coal	7"	K-55	20#/FT	N/A	2249'	
Intermediate						
Production	4-1/2"	J-55	10.5#/FT	N/A	4929'	270 SKS
Tubing	2-3/8"	J-55	4.7#/FT		4810'	N/A
Liners						

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Packers: Kind: _____
Sizes: _____
Depths Set _____

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1. Phase 1- Preliminary activities

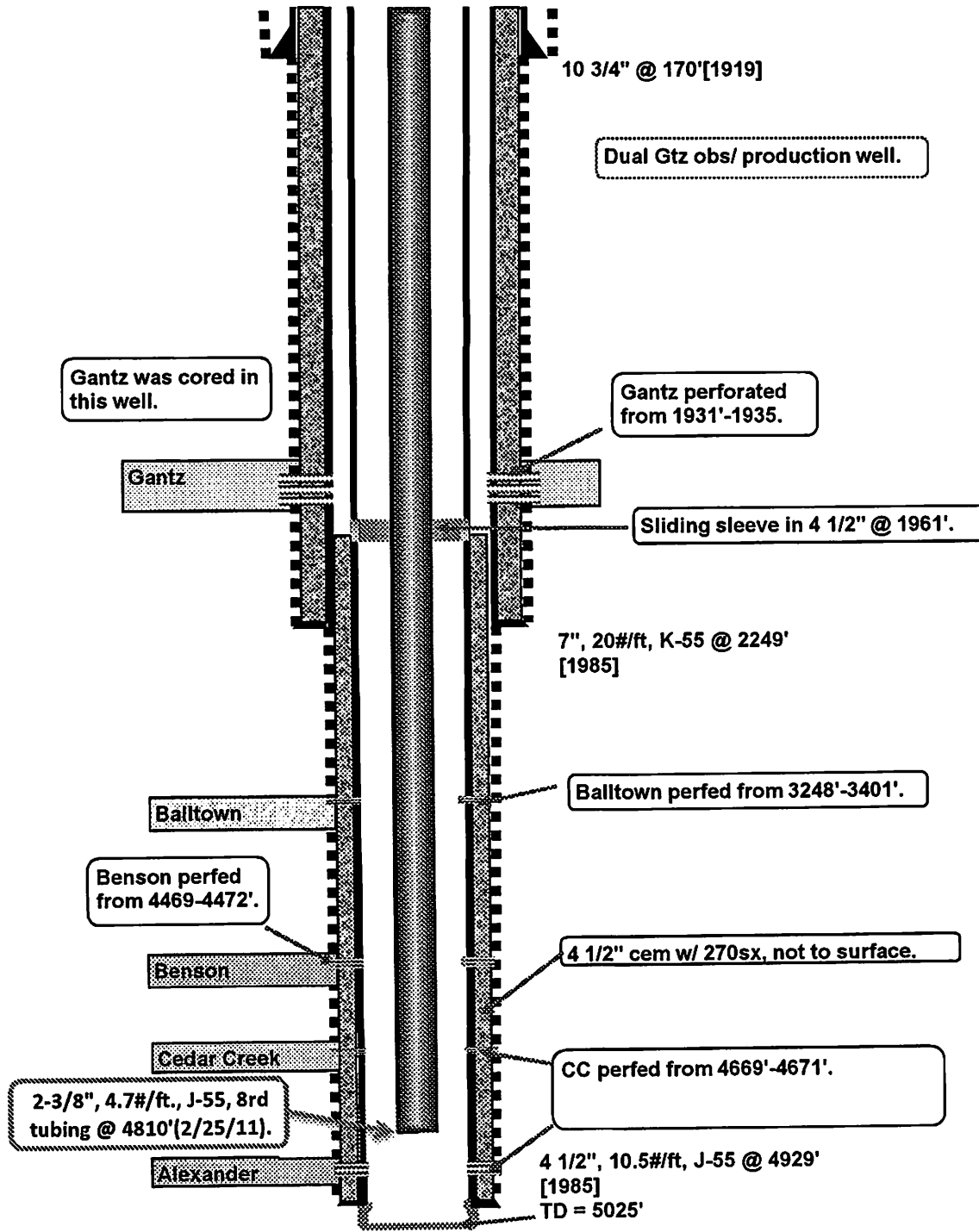
1. File for and receive necessary regulatory permits
2. Upgrade site and access road; disconnect and remove any unnecessary production equipment
3. Install any remaining necessary well site containment

2. Phase 2- Well work activities

1. MIRU rig and any other ancillary equipment
2. Pull 2-3/8" tubing
3. Log 4-1/2" casing
4. Install all BOPE equipment
5. TIH with work string to above td
6. Spot cement balance plug from bottom of well to immediately below Gantz, satisfying the requirements of §22-6-24 (a) 13.4.a.1-5
7. TOOH with work string
8. WOC
9. Tag and verify the cement plug top
10. Perforate 4-1/2" casing immediately below Gantz
11. Set cement retainer immediately above 4-1/2" squeeze perforations
12. Squeeze cement into 4-1/2"x7" annulus. Designed to be to surface.
13. WOC
14. TOOH and move out rig
15. RDMO service rig and ancillary equipment
16. Perform top joint and well head change out activities
17. Bond log 4-1/2" casing
18. Perforate 4-1/2" casing across Gantz formation
19. Swab 4-1/2" casing
20. Remove all environmental controls and assure 70% growth of vegetation

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Kennedy Storage
 #8151 [OBS]
 Permit #47-033-01594
 Elev = 1128'[GL]



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Well Name & Number:	8151		Lease	C. C. Ash	
County or Parish:	Harrison	State/Prov.	WV	Country:	USA
Perforations: (MD)	1931' - 1935' [Gtz]		(TVD)	5025'	
Angle/Perfs	Angle @KOP and Depth		KOP TVD		
BHP:	BHT:	Completion Fluid:			
FWHP:	FBHP:	FWHT:	FBHT:	Other:	
Date Completed:	07/05/19			RKB:	
Prepared By:	Richard Cross		Last Revision Date:	03/02/11	



IV-35
(Rev 8-81)

State of West Virginia
Department of Mines
Oil and Gas Division

Date January 10, 1986
Operator's
Well No. 8151
Farm C. C. Ash
API No. 47-033-1594-DD

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil ___ / Gas X / Liquid Injection ___ / Waste Disposal ___ /
(If "Gas," Production X / Underground Storage ___ / Deep ___ / Shallow ___ /)

LOCATION: Elevation: 1147' Watershed Kincheloe Creek
District: Union County Harrison Quadrangle West Milford

COMPANY Consolidated Gas Transmission Corp.
ADDRESS 445 W. Main St., Clarksburg, WV
DESIGNATED AGENT W. A. Fox
ADDRESS 445 W. Main St., Clarksburg, WV
SURFACE OWNER Richard Wolfe
ADDRESS 206 Waverly Way, Clarksburg, WV
MINERAL RIGHTS OWNER Darrell D. Richards, Act.
ADDRESS Rt. 2, Jane Lew, WV 26378
OIL AND GAS INSPECTOR FOR THIS WORK Stephen
Casey ADDRESS Rt. 2, Box 232-D
Jane Lew, WV 26378
PERMIT ISSUED March 25, 1985
DRILLING COMMENCED October 1, 1985
DRILLING COMPLETED October 6, 1985
IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
ON _____

Casing Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
<u>18-10"</u>		<u>170</u>	
<u>9 5/8</u>			
<u>8 5/8</u>			
<u>7</u>	<u>2249</u>	<u>2249</u>	<u>To surface</u>
<u>5 1/2</u>			
<u>4 1/2</u>	<u>4929</u>	<u>4929</u>	<u>270 sks.</u>
<u>3</u>			
<u>2</u>			
Liners used			

GEOLOGICAL TARGET FORMATION Balltown, Benson & Alexander Depth see perf. feet
Depth of completed well 102 feet Rotary X / Cable Tools _____
Water strata depth: Fresh none feet; Salt _____ feet
Coal seam depths: 102-110 Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Balltown, Benson & Alexander Pay zone depth see perf. feet
Gas: Initial open flow 56 Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 1302 Mcf/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 2 hours
Static rock pressure 1000 psig (surface measurement) after 14 ^{days} hours shut in
(If applicable due to multiple completion--)
Second producing formation _____ Pay zone depth _____ feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ Mcf/d Oil: Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ hours
Static rock pressure _____ psig (surface measurement) after _____ hours shut in

FORM IV-35
(REVERSE)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perforated Alexander - 4812-4816 with 8 holes and 4669-4671 with 2 holes.
Fractured with 600 bbls. of water, 60,000# sand and 750 gal. 15% HCL.

Perforated Benson - 4459-4472 with 9 holes.
Fractured with 400 bbls. of water, 40,000# sand and 750 gal. 15% HCL.

Perforated Balltown - 3248 - 3401 with 13 holes
Fractured with 800 bbls. of water, 80,000# sand and 750 gal. 15% HCL.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Old Hole					
Pittsburgh Coal			102	110	
Dunkard			487	580	
Salt			840	910	
Maxon			1575	1602	
Injun			1658	1768	
Berea			1819	1844	
Gantz			1964	1989	
Fifty Foot			2030	2056	
Thirty Foot			2128	2206	
Gordon			2265	2295	
Fourth			2374	2380	
Fifth			2428	- -	
Total Depth - Old Hole				2466	
New Hole					
Wood, Metal & Formation			2280	2480	
Sand & Shale			2480	3030	
Sandy shale			3030	3300	
Sand & Shale			3300	4050	
Sandy			4050	4220	
Sand & Shale			4220	4760	
Sandy			4760	4830	
Sand & Shale			4830	5025	
Gamma Ray Tops					
Fifth			2430	2461	
Warren			2815	2844	
Upper Speechley			3014	3052	
Speechley			3137	3153	
Balltown			3370	3441	
Bradford			3772	3935	
Riley			4171	4397	
Benson			4477	4498	
Cedar Creek			4636	4698	
Alexander			4770	4851	
Drillers Total Depth				5025	
Log Total Depth				4945	

(Attach separate sheets as necessary)

Consolidated Gas Transmission Corp.
Well Operator

By: J. P. Thurman / Manager of Production
Date: January 14, 1986

Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

47-033-01594 W

33-01594-F

Form 124 29 Dec. 1918

8151

033-1594

Record of PHOENIX GAS COMPANY Company
 Well No. 647 Harrison District
 Located on C. C. Ash Farm
 District Union County Harrison State W. Va.

Location Made 5-24-19 First Work Done 4-4-19
 Rig Commenced 5-1-19 Rig Completed 5-9-19
 Drilling Commenced 5-19-19 Drilling Completed 7-5-19
 Rig Contractor J. H. Jemey Drilling Contractor B. A. Mann
 Drillers Toothman and T. D. Simpson (H. M. Co. Tools, String Ma.)
 Tool Dressers Logus and Okey Harbert

FORMATION	Open or Close Hard or Soft	TOP	BOTTOM	Steel Line Measurements	Water Found Depth	Oil Found Depth	Gas Found Depth	REMARKS
Native Coal		55	60					
Pittsburgh Coal		102	110					
Little Dunkard		487	514					
Big Dunkard		547	580					
Gas Sand		684	728					
First Salt	open	840	910					
Second Salt		1170	1300		1510 hole full water			
Maxon		1575	1602					
Little Lime								
Pencil Cave	soft	1602	1606					
Big Lime		1606	1658					
Big Injun		1658	1768	steel L.			1687	
Squaw		1774	1800					
Berea	open	1819	1844					
Gantz	open	1964	1989					
Fifty Feet	hard	2030	2056					
Thirty Feet	hard	2128	2206					
Gordon Stray	broken up							
Gordon	hard	2265	2295	S.L.				
Fourth		2374	2380					
Fifth		2428			gas	2430	2434	
Bayard								
Total Depth			2466					

SIZE	Charged to Well		Put in Well		Pulled Out		Left in Well		Transferred Before Completing		Left at Well Not in Use		REMARKS
	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	Feet	In.	
13" Csg.													
10" "	184	3	170	3			170	3			14		Couldn't pull 10" Csg.
8" "	1159	6	1112		1112					1139	6		
6 5/8" "	1972		1680				1680			292			
6 3/8" "													
2" Tbg.	2614	6	2466				2466			148	6		
2" P.T.F.	16	11	16	11			16	11					

PACKER RECORD

SIZE	KIND	Amount Anchor	Amount Above Anchor	REMARKS
6 3/8 x 8	J.H.			
5-5/16 x 2	Anchor	161	2285	

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WW-2A
(Rev. 6-14)

1). Date: 4/30/2019
2.) Operator's Well Number 8151
State 47- County Harrison Permit 01594
3.) API Well No.: 47- Harrison - 01594

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:
(a) Name Donna Lee Davis
Address 2128 Kincheloe Road
Jane Lew, WV 26378
(b) Name _____
Address _____
(c) Name _____
Address _____
6) Inspector _____
Address _____
Telephone _____

5) (a) Coal Operator
Name _____
Address _____
(b) Coal Owner(s) with Declaration
Name _____
Address _____
Name _____
Address _____
(c) Coal Lessee with Declaration
Name _____
Address _____

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TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

OR
 Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)
I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through ___ on the above named parties by:
 Personal Service (Affidavit attached)
 Certified Mail (Postmarked postal receipt attached)
 Publication (Notice of Publication attached)
I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete.
I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Dominion Energy Transmission, Inc
By: John M. Love
Its: Designated Agent
Address: 925 White Oaks Blvd
Bridgeport, WV 26330
Telephone: 304-203-5830
Email: john.d.frost@dominionenergy.com

Subscribed and sworn before me this 13th day of May, 2019

Brenda M. Johnson
My Commission Expires March 31, 2020
Oil and Gas Privacy Notice



The Office of Oil and Gas processes your personal information, such as name, address and phone number, as part of its normal course of business or as required by law. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as required by law with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov

U.S. Postal Service 47-033-01594W

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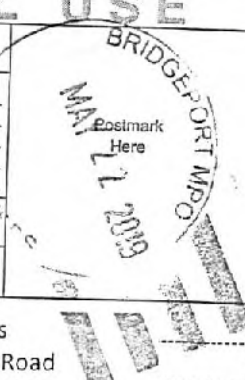
OFFICIAL USE

7017 0190 0000 9775 7116

Certified Mail Fee	\$ 3.50
Extra Services & Fees (check box, add fee as appropriate)	
<input checked="" type="checkbox"/> Return Receipt (hardcopy)	\$ 2.80
<input type="checkbox"/> Return Receipt (electronic)	\$ 0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$ 0.00
<input type="checkbox"/> Adult Signature Required	\$ 0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$ 0.00

Postage	\$ 95
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Total Postage and Fees	\$ 7.25
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Sent To: Donna Lee Davis
 Street and Apt. No., or P.O. #: 2128 Kincheloe Road
 City, State, ZIP+4®: Jane Lew, WV 26378

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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WW-2A Surface Waiver
(4/16)

SURFACE OWNER WAIVER

County Harrison Operator Dominion Energy Transmission
Operator well number 8151

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A

The well operator named on page WW2A is applying for a permit from the State to do oil or gas well work. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

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Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have **FIFTEEN (15) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons;
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

List of Water Testing Laboratories. The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application for a Well Work Permit on Form WW2-A, and attachments consisting of pages 1 through ___ including a work order on Form WW2-B, a survey plat, WW-9, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

_____	Date _____	Company Name _____	_____
Signature		By _____	Date _____
_____		Its _____	_____
Print Name		Signature _____	Date _____

WW-2A Coal Waiver

COAL OPERATOR, OWNER, OR LESSEE WAIVER

County Harrison
Operator Dominion Energy Transmission, Inc Operator's Well Number 8151

INSTRUCTIONS TO COAL OPERATOR, OWNER, OR LESSEE

To the coal operator, owner, or lessee named on page WW2-A. You are hereby notified that any objection you wish to make or are required to make by WV Code 22-6-15, 16 or 17, must be filed with the Chief of the Office of Oil and Gas within fifteen (15) days after the receipt of this application by the Office. Mail objections to:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304)-926-0499 extension 1654

WAIVER

The undersigned coal operator _____ / owner _____ / lessee _____ / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

FOR EXECUTION BY A NATURAL PERSON

Signature Date _____

FOR EXECUTION BY A CORPORATION, ETC.

Company Name _____
By _____
Its _____ Date _____

Signature Date _____

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WW-2A1
(Rev. 1/11)

Operator's Well Number 8151

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6, Section 8(d)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that -

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Please see attached document			

**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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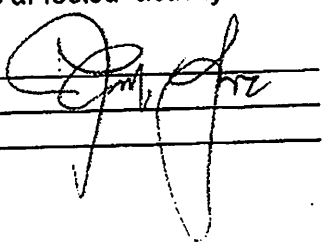
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The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator:
By:Its:

Dominion Energy Transmission
John Love
 Director of storage and land services



WW-2A1

ATTACHMENT

Grantor/Lessor	Grantee/Lessee	Royalty	Book page
Harriet Thrash Et Al	Hope Natural Gas	Storage	723/436

Hope Natural Gas Company changed its name to Consolidated Gas Supply Corporation. On January 1, 1984 Consolidated Gas Supply Corporation assigned its leasehold interest to Consolidated Gas Transmission Corporation. On January 1, 1998 Consolidated Gas Transmission Corporation became CNG Transmission Corporation. As a result of a merger with Dominion Resources Inc. CNG Transmission Corporation changed its name to Dominion Transmission Inc. on May 2000. Dominion Transmission Inc. changed its name to Dominion Energy Transmission Inc. on May 12, 2017.

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WW-2B1
(5-12)

Well No. 8151

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Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name No water sources identified for human consumption, domestic animals, or other general use
Sampling Contractor Identified within 2000 ft of the existing storage well.

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AUG - 8 2019

Well Operator Dominion Energy Transmission, Inc
Address 925 White Oaks Blvd
Bridgeport, WV 26330
Telephone 681-622-1948

WV Department of
Environmental Protection

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

47-033-01594W

August 2nd, 2019

By U.S Mail, Certified Delivery

7018 0680 0000 8051 9001

WV DEP
Office of Oil and Gas
601 57th Street
Charleston, WV 25304
Art: Jeff McLaughlin OOG

RE: Permit 8151 (47-033-01594) Rework Application

To the Office of Oil and Gas,

Dominion Energy Transmission, Inc. is submitting the permit application packet for reworking 8151 (47-033-01594)

The following documents are enclosed:

- Check for rework application (EF0000113489)
- Permit application packet
- Mylar
- Copies of certified mail receipts from landowners
- Topographic map section

CK# 314021
Amt \$650
Date 6/5/19

The documents enclosed are for your records and review. If you should have any questions or comments related to the rework operations, please contact me by the means of the information listed below.

Sincerely,

J. Daniel Frost

(C): 681-622-1948

(E): john.d.frost@dominionenergy.com

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WW-9
(5/16)

API Number 47 - 033 - 01594
Operator's Well No. 8151

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Domintion Energy Transmission, Inc OP Code 307048

Watershed (HUC 10) Middle West Fork River Quadrangle West Milford

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: N/A

Will a synthetic liner be used in the pit? Yes No If so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

SDW
5/16/2019

Will closed loop system be used? If so, describe: Yes, above ground steel pits and dumpster receptacles.

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Water based

-If oil based, what type? Synthetic, petroleum, etc.

Additives to be used in drilling medium? Sodium/Potassium Chloride, Xanthan gum, Sodium Bicarbonate, Caustic Soda, Biocide

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? Waste Management, Clarksburg, WV

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Environmental Protection

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature _____

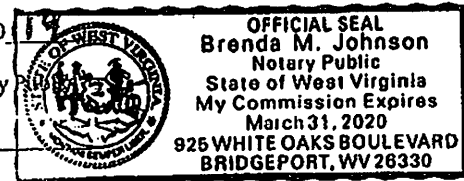
Company Official (Typed Name) John M. Love

Company Official Title Director, Storage and Land Services

Subscribed and sworn before me this 13th day of May, 2019

Brenda M. Johnson Notary

My commission expires March 31, 2020



Form WW-9

Operator's Well No. 8151

Proposed Revegetation Treatment: Acres Disturbed 1.3 acres Prevegetation pH _____

Lime 3.0 Tons/acre or to correct to pH 6.5

Fertilizer type 10/10/20

Fertilizer amount 500 lbs/acre

Mulch Hay or Straw @ 2.5 Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

Meadow Mix @ 40lbs/acre

Meadow Mix @ 50lbs/acre

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: S. Dubois

Comments: _____

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AUG - 8 2019

WV Department of
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Title: OOG Inspector

Date: 5/6/2019

Field Reviewed? () Yes (X) No

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
GROUNDWATER PROTECTION PLANOperator Name: Dominion energy Transmission
Watershed (HUC 10): Middle West Fork River Quad: West Milford
Farm Name: C.C. Ash

1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

Well workover fluids generated in relation to downhole well work will be contained in above ground tanks and will be hauled offsite for disposal at a DETI approved facility.
Surface water will be handled, as follows:
Surface water not entering the site containment will be diverted to E&S controls, to minimize sedimentation.
Surface water entering the site containment will be evaluated for contamination. If contamination is present, the water will be collected and hauled offsite for disposal at a DETI approved facility. If no contamination has occurred, the water will be discharged from the site and will be diverted to E&S controls, to minimize sedimentation.

2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

A temporary cellar will be installed around the well. The cellar will be of metal construction. The floor will be sealed with an impermeable barrier (e.g. synthetic liner, cement, etc.). Full site containment will be employed. The site containment will consist of an impermeable synthetic liner, overlain with matting materials. The sides of the containment will be bermed.

3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

Closest water body: Unnamed tributary of Kincheloe Creek
Distance to closest water body (from wellhead): 150' to unnamed tributary
No Well Head Protection Area within 2000' of the discharge area

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Environmental Protection

4. Summarize all activities at your facility that are already regulated for groundwater protection.

Existing gas storage/production well. Well is operated in accordance with any regulations required, pertaining to groundwater protection.

5. Discuss any existing groundwater quality data for your facility or an adjacent property.

No groundwater quality data available.

No sources of water utilized for human consumption, livestock consumption, or other potable use were identified during surveying activities, within 2000'.

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

No waste material will be used for deicing or fill material on the property. Fill material utilized will either be existing soil and rock at the site or construction grade aggregate and materials. No deicing is planned for this site. In the event deicing is required, no waste products will be used for this purpose.

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

Employees will be instructed to identify fluids present in the site containment area. If the fluids have not been contaminated with workover fluid and do not have an oil sheen present, the fluid may be discharged and diverted to E&S controls to minimize sedimentation.

If the fluids present in the site containment area have been contaminated with workover fluid or have an oil sheen present, they will be gather and hauled to offsite disposal at a DETI approved facility.

E&S controls are to be monitored and maintained.

State regulations require a copy of the permit associate with this GPP to be on site for the duration of the planned well work. This Groundwater Protection Plan will be included in that permit package and may be used as guidance for preventing groundwater contamination.

8. Provide provisions and frequency for inspections of all GPP elements and equipment.

E&S controls will be inspected on a weekly basis, at a minimum.

Site containment will be monitored as part of the daily well work activities. Site containment will be removed and hauled offsite to an approved DETI facility, at the completion of the project

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Environmental Protection

Signature: S. D. Warratt

Date: 5/6/2019

47-033-01894 W

BW-8151 WELL
EROSION & SEDIMENTATION CONTROL PLAN
UNION DISTRICT, HARRISON COUNTY, WEST VIRGINIA

PREPARED FOR :
DOMINION ENERGY TRANSMISSION, INC.

925 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330

<u>CONSULTANTS</u>	
SIGNATURES	DATE



TS-1	TITLE SHEET
ES-1	EROSION & SEDIMENTATION CONTROL PLAN
DS-1	EROSION & SEDIMENTATION CONTROL NOTES & DETAILS

ABBREVIATIONS	LEGEND	LEGEND
BMP - BEST MANAGEMENT PRACTICES	---	GC - EXISTING GAS WELL
CF - COMPOST FILTER ROCK	---	GR - GRAVEL
ES - EROSION & SEDIMENTATION	---	CF1 - PROPOSED 1" COMPOST FILTER ROCK
EX - EXISTING	---	CF2 - PROPOSED 2" COMPOST FILTER ROCK
LAT - LATITUDE	---	CF3 - PROPOSED 3" COMPOST FILTER ROCK
LONG - LONGITUDE	---	CF4 - PROPOSED 4" COMPOST FILTER ROCK
QUAD - QUADRANGLE	---	RC - PROPOSED ROCK CONSTRUCTION ENTRANCE
PROP - PROPOSED	---	
RCE - ROCK CONSTRUCTION ENTRANCE	---	

CALL BEFORE YOU DIG!

WEST VIRGINIA LAW REQUIRES
48 HOUR NOTICE FOR CONSTRUCTION PHASE
AND NO MORE THAN 10 WORKING DAYS IN ADVANCE

West Virginia One Call System, Inc.
8-1-1

POCS Serial No. _____

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WV Department of
Environmental Protection

THIS DRAWING IS FOR THE EROSION AND SEDIMENTATION CONTROL PLAN/PERMIT ONLY.

POLESTAR
ENGINEERING SURVEYING ENVIRONMENTAL
PHOTOGRAPHY
PHONE: (774) 550-0190 FAX: (774) 550-4128
400 DIXON BLVD.
UNIONTOWN, PA 15401

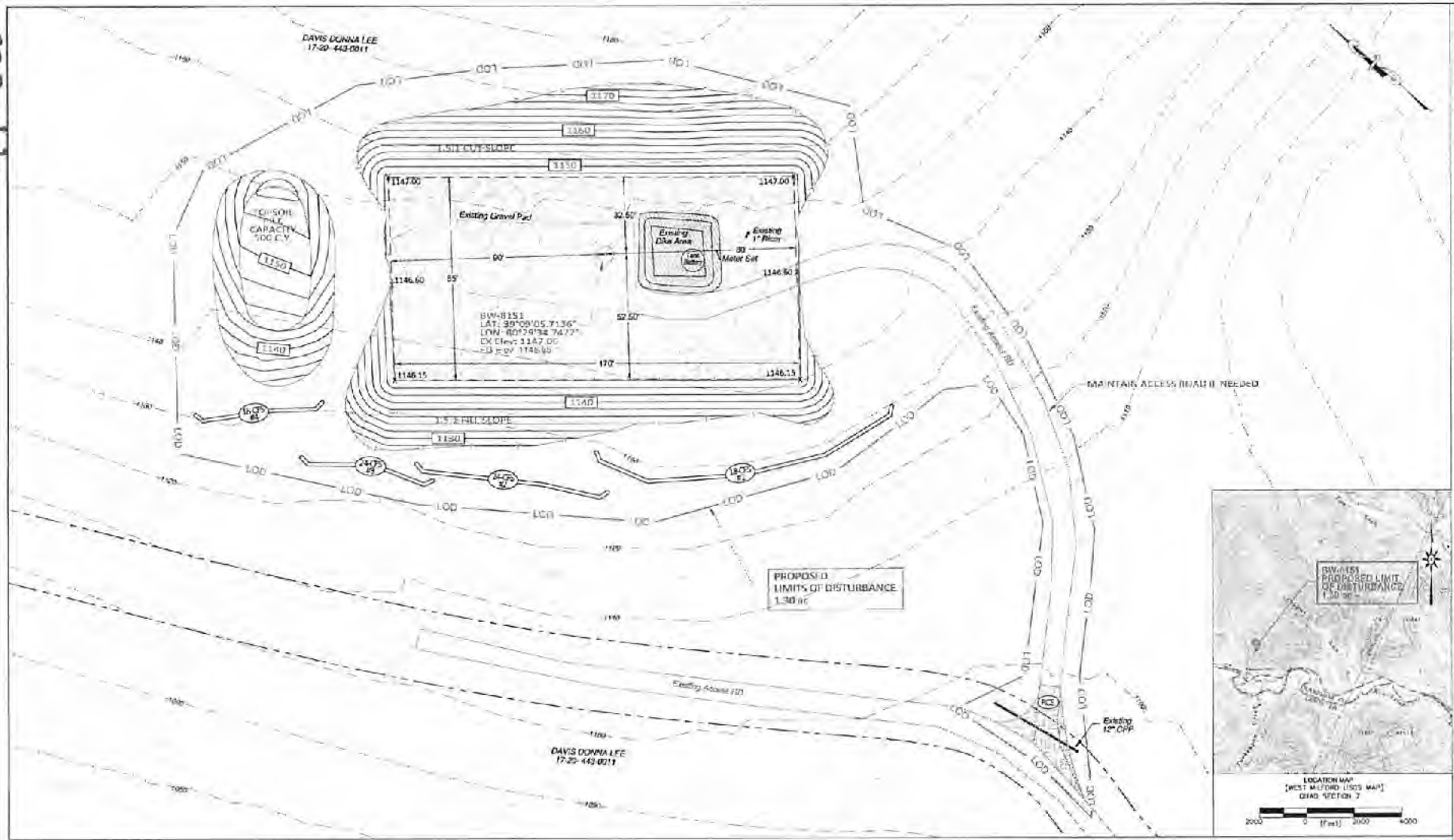
REVISION RECORD	
No.	Date

DOMINION ENERGY TRANSMISSION, INC.
BW-8151 WELL
UNION DISTRICT, HARRISON COUNTY
WEST VIRGINIA

Project Number: RW-8151
Drawing Scale: 1/8"=1'-0"
Date Issued: 2-19-2019
Title Number: _____
Drawn By: EDG
Checked By: JSA
Project Manager: RJC

TS-1

47-033-01594W



GENERAL NOTES

1. Temporary and existing access roads must be enclosed to the site to prevent erosion and sedimentation.
2. All areas that were not used or disturbed, the contractor is not required to do the Erosion & Sedimentation Control (ESC) Best Management Practices or perform site restoration.
3. All utility existing underground utilities will be verified along the LLO to their location from surface. If at any time a larger flow line becomes available, the contractor shall be notified immediately in accordance with the installation procedure outlined in the details.
4. ESC diverting from those shown on the plans may be needed by the contractor based on construction and/or final grading techniques utilized.
5. All information obtained from aerial or survey data.
6. Establish project limits to outside 100 Year Flood Hazard Area (Zone X). See FEMA Flood Insurance Rate Map Number 5403 (02040) (EFFECTIVE 10-3-2002).
7. Erosion Control Blankets to be placed on all disturbed slopes greater than 3:1 and on all disturbed areas within 50' of stream unless otherwise noted.

PROPOSED PAD EARTHWORK

Proposed Removal Volume: 485.25 C.Y.
 Cut Volume: 1,942.30 C.Y.
 Fill Volume: 1,952.30 C.Y.
 Area in Cut: 15,389.9 S.F. = 0.35 Acres
 Area in Fill: 12,192.2 S.F. = 0.28 Acres

Perimeter Control Schedule
 (See Erosion & Sediment Control Turn Key Control Locations)

Perimeter Control #	C/S Slope	Slope Percent	Slope Length Above Barrier (ft)	C/S Length (ft)
1	3:1	33.0%	40	160
2	2:1	50.0%	43	172
3	2:1	50.0%	77	308
4	1.5:1	40.0%	77	311

CALL BEFORE YOU DIG!

WEST VIRGINIA LAW REQUIRES AN HOUR NOTICE FOR CONSTRUCTION TRAILS AND NO MORE THAN 15 WORKING DAYS IN ADVANCE.

West Virginia One Call System, Inc.

8-1-1

POSS Detail No. _____



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BMW Department of Environmental Protection



REVISION RECORD

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
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7		

DOMINION ENERGY TRANSMISSION, INC.
BW-8151 WELL

UNION DISTRICT - HARRISBORO COUNTY
 WEST VIRGINIA

EROSION & SEDIMENTATION CONTROL PLAN

Project Number: ETR 8151
 Drawing Scale: 1" = 20'
 Date Issued: 4/19/2015
 Issue No: 01
 Drawn By: EJE
 Checked By: JLS
 Project Manager: WM

ES-1

THIS DRAWING IS FOR THE EROSION AND SEDIMENTATION CONTROL PLAN/PERMIT ONLY.

TABLE 11.4 - Recommended Seed Mixtures

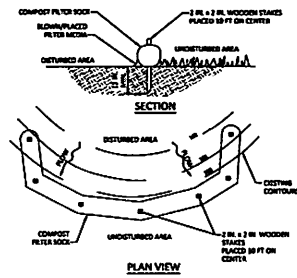
Mixture Number	Species	Seeding Rate - Pura Live Seed	
		Basic Seed	Advised Seed
1'	Spring grass (perennial), or Annual ryegrass (spring or fall), or Annual wheat (fall), or Winter rye (fall)	10	15
	Timothy, or Perennial ryegrass, plus	5	5
	5-10	10	15
	5-10	10	15
	5-10	10	15

(Note: Additional rows in table follow similar patterns for various plant species and seeding rates.)

Farm State, "Erosion Control and Conservation Plantings on Nonarmland"

TABLE 11.2 - Soil Amendment Application Rate Equivalents

Soil Amendment	Permanent Seeding Application Rate			Notes
	Per Acre	Per 1,000 sq. ft.	Per 3,000 sq. ft.	
Agricultural lime	6 tons	340 lb.	2,640 lb.	Or as per soil test; may not be required in agricultural fields.
10-20-20 fertilizer	1,000 lb.	75 lb.	710 lb.	Or as per soil test; may not be required in agricultural fields.
Agricultural lime	1 ton	40 lb.	410 lb.	Typically not required for topsoil incursions.
10-10-10 fertilizer	500 lb.	12.5 lb.	100 lb.	Typically not required for topsoil incursions.



NOTE: SOIL FABRIC SHALL MEET STANDARDS OF TABLE 9.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST FILTER SOCKS SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH SIDES OF THE BANDER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AS TO EXISTING TO THE MAIN BANDER. MAXIMUM ALLOWABLE SLOPE LENGTH ABOVE ANY BANDER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND SHALL BE OF ITS TEMPORARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BANDER AND EXPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL EVENT. DAMAGED SOCKS SHALL BE REMOVED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

RECONSTRUCTION OF COMPOST FILTER SOCKS SHALL BE COMPLETED WITHIN 60 DAYS OF INSPECTION.

UPON STABILIZATION OF THE AREA SUBJECT TO THE SOCK, STAPLES SHALL BE REMOVED. THE SOCKS MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED IN THE LATTER CASE, THE SOCK SHALL BE CUT OPEN AND THE MATCH BRUSHED IN A SOIL IMPROVER.

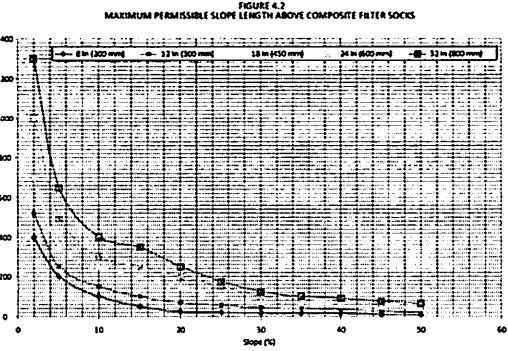
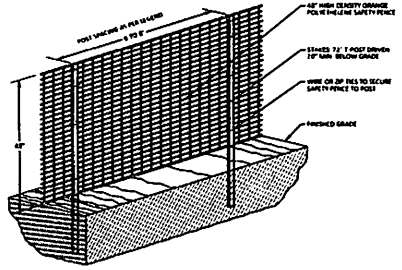


TABLE 11.3 - Recommended Seed Mixtures for Stabilizing Disturbed Areas

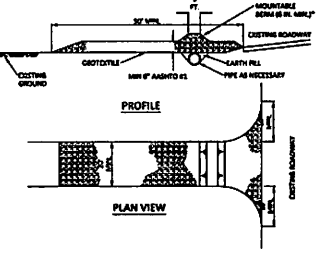
Site Condition	Harvest Crop	Seed Mixture (Select one mixture)
Slips and Banks (not mowed)	Wheat or annual	1 plus 3, 5, 6, or 11'
Variable drainage	Wheat or annual	3 or 7'
Slips and Banks (mowed)	Wheat or annual	2 or 10'
Variable drainage	Wheat or annual	2, 3, 5, or 11'
Slips and banks (mowed/grazed)	Wheat or annual	2, 3, 5, or 11'
Variable drainage	Wheat or annual	2, 3, 5, or 11'
Disturbed Areas (PAEP)	Wheat or annual	1 plus 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100



STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK
N.T.S.

1. ALL SENSITIVE AREAS SHALL BE PROTECTED AS PER PLAN.
2. POST SELECTION SHOULD BE BASED ON EXISTING SLOPE AND THE LENGTH OF TIME THE FENCE WILL BE IN PLACE. FLOORING, FENCEPOSTS, AND POSTS ARE NOT RECOMMENDED FOR SENSITIVE AREAS. FENCEPOSTS SHOULD BE MADE OF GALVANIZED STEEL OR ALUMINUM. METAL POSTS ON TRILLED WOOD POSTS ARE TYPICALLY USED FOR CONSTRUCTION.
3. POSTS SHOULD BE SPACED EVERY 10 FEET OR THE EQUIVALENT OF 1/2 OF THE HEIGHT OF THE POST FOR POSTS. A 6 FOOT POST SHOULD BE AT LEAST 1 FOOT IN THE GROUND.
4. SPACE POSTS EVERY 10 TO 15 FEET.
5. SECURE FENCING TO POSTS WITH IRON CHAINS. IRON WOOD STAPLES MAY ALSO BE USED TO PROVIDE ADDITIONAL SUPPORT AND PROTECTION FROM BEING TIPPED AND MOVED.

ORANGE CONSTRUCTION FENCE DETAIL
N.T.S.



NOTE: MOBILE BERM TOPPING PRIOR TO INSTALLATION OF SOIL CONSTRUCTION ENTRANCE. EXTENDED HEDGE OVER FULL WIDTH OF ENTRANCE.

RAINFALL SHALL BE DIVERTED FROM ROADWAY TO A SURFACE SECONDARY DRAINAGE DRAIN FROM DISTURBED SOIL CONSTRUCTION ENTRANCE.

MOBILE BERM SHALL BE INSTALLED IMMEDIATELY UPON CONSTRUCTION OF ENTRANCE. MOBILE BERM PROTECTIVE VEGETATION SHALL BE INSTALLED IMMEDIATELY UPON CONSTRUCTION OF ENTRANCE. MOBILE BERM SHALL BE MAINTAINED THROUGHOUT PERIOD OF CONSTRUCTION.

MOBILE BERM CONSTRUCTION ENTRANCE THRESHOLD SHALL BE MAINTAINED OR REPAIRED TO THE SPECIFIED HEIGHT OF PROTECTIVE VEGETATION. A SURFACE SHALL BE CONSTRUCTED ON SITE FOR THIS PURPOSE. ALL SURFACE CONSTRUCTION SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF MOBILE BERM CONSTRUCTION ENTRANCE. IF EXISTING LANDSCAPE OR SOIL CONSTRUCTION ENTRANCE IS NOT MAINTAINED, CONSTRUCTION OF MOBILE BERM CONSTRUCTION ENTRANCE SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF MOBILE BERM CONSTRUCTION ENTRANCE. MOBILE BERM CONSTRUCTION ENTRANCE SHALL BE MAINTAINED THROUGHOUT PERIOD OF CONSTRUCTION.

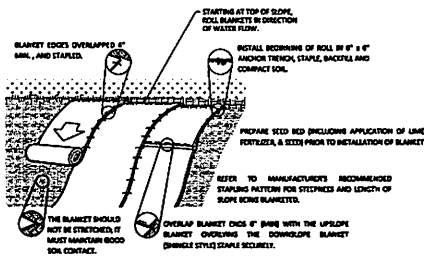
STANDARD CONSTRUCTION DETAIL #3-1
ROCK CONSTRUCTION ENTRANCE
N.T.S.

TABLE 9.1 - Composite Sock Fabric Minimum Specifications

Material Type	1 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Film PP (Polypropylene)	Heavy Duty Multi-Film Polypropylene (PODUF PP)
Material of Construction	Photo-degradable	Photo-degradable	Biodegradable	Photo-degradable	Photo-degradable
Mesh Diameter	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Mesh Opening	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Mesh Strength	26 psi	26 psi	26 psi	44 psi	302 psi
UV Radiation Stability	23% at 1000 hr.	23% at 1000 hr.	100% at 1000 hr.	100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years

TABLE 4.2 - Composite Standards

Organic Matter Content	80% (10% dry weight basis)
Organic Fraction	Fibrous and elongated
pH	5.5 - 6.0
Nutrient Content	25% - 35%
Particle Size	80% pass through 1" screen
Soluble Salt Concentration	3.0 G/50 ml (max/min)



- NOTE: 1. SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE NOTES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.
2. PROVIDE ANCHOR TRENCH AT TOP OF SLOPE IN SIMILAR MANNER AS AT TOP OF SLOPE.
3. SLOPE SURFACE SHALL BE FREE OF ROCKS, LOGS, STICKS, AND CHIPS.
4. BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. BLANKET SHOULD BE STAPLED TO MAINTAIN GOOD CONTACT WITH SOIL. DO NOT STRETCH BLANKET.
5. STAPLING OF THE BLANKET SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. BLANKETTED AREAS SHALL BE MAINTAINED WEEKLY AND AFTER EACH RAINFALL EVENT UNTIL PERMANENT VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM TONNAGE THROUGHOUT THE BLANKETTED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE REPAIRED OR REPLACED WITHIN A 24 HOUR PERIOD.
7. UNDERCROSSING WITH TRAFFIC MAY BE USED IN BLANKET AREAS.

STANDARD CONSTRUCTION DETAIL #11-1
EROSION CONTROL BLANKET INSTALLATION
N.T.S.

RECEIVED
 Office of Oil and Gas
 WV Department
 Environmental Protection
 AUG - 8 2011

THIS DRAWING IS FOR THE EROSION AND SEDIMENTATION CONTROL PLAN/PERMIT ONLY.



REVISION RECORD

NO.	DESCRIPTION	DATE

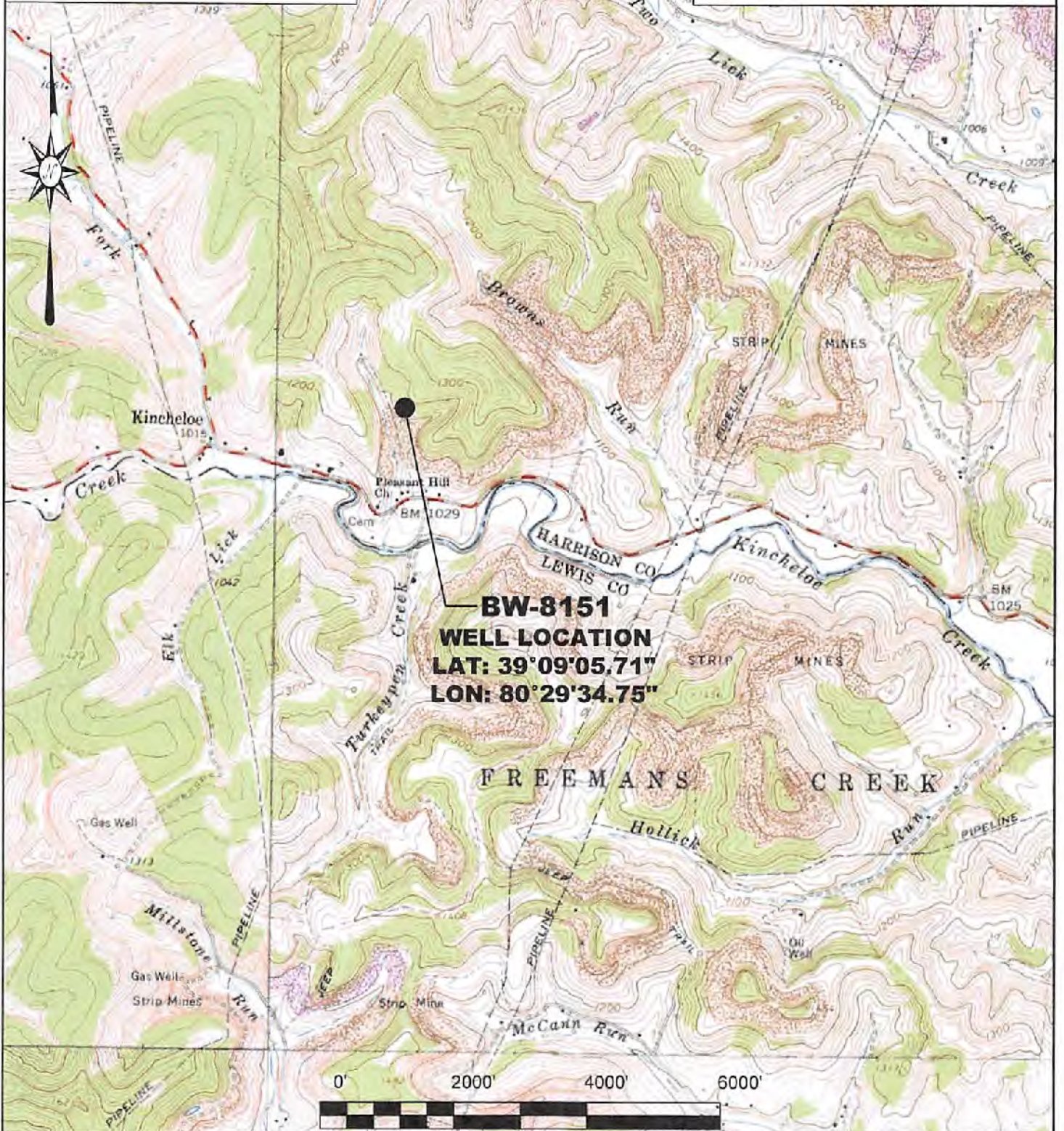
DOMINION ENERGY TRANSMISSION, INC.
 BW-8151 WELL
 UNION DISTRICT, HARRISON COUNTY, WEST VIRGINIA

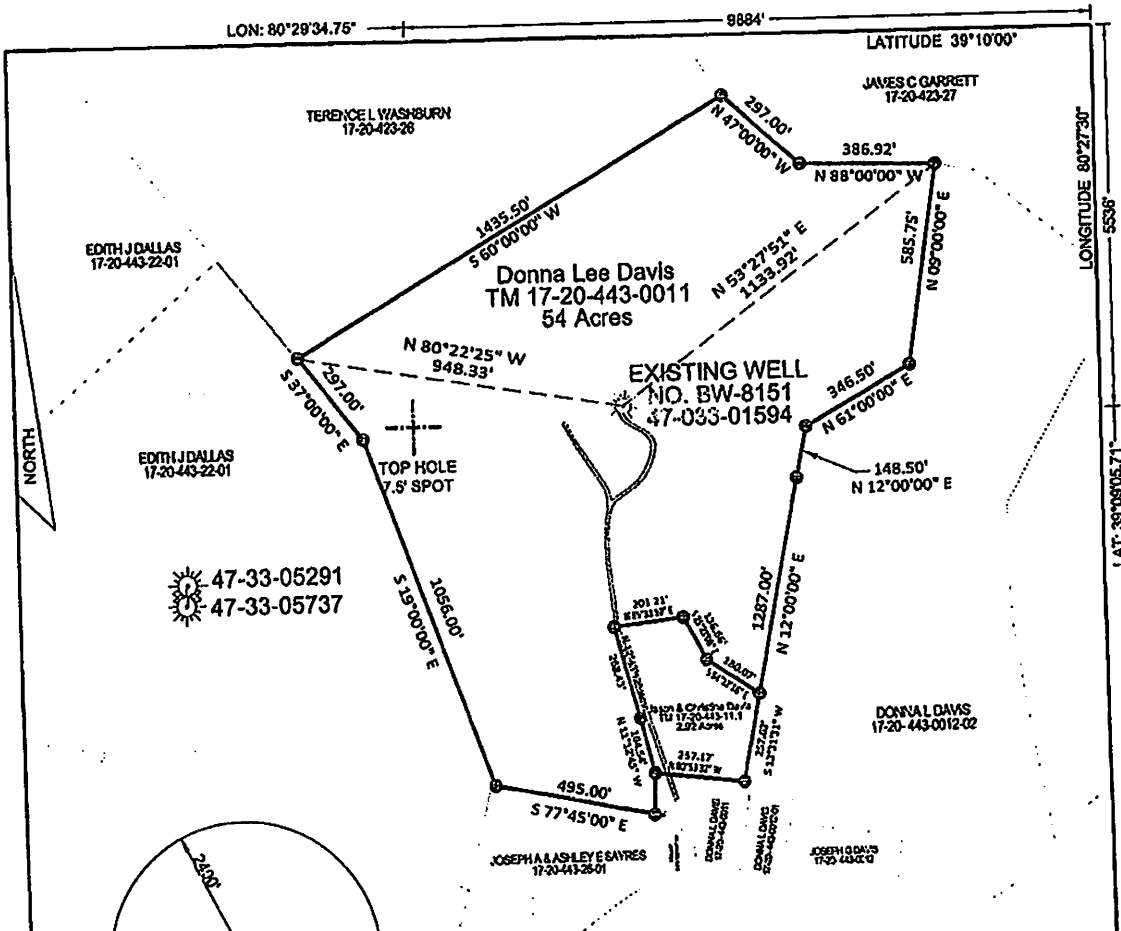
Printed Number: BW-8151
 Drawing Name: Erosion Control
 Issue Number: 12/11/2011
 Issue Date: 12/11/2011
 Drawn By: JCH
 Checked By: JCH
 Project Manager: JCH

DETAIL SHEET
DS-1

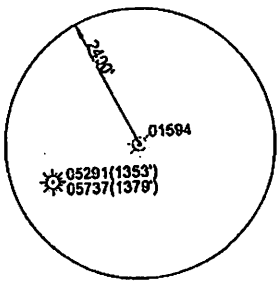
POLESTAR
ENGINEERING, SURVEYING, ENVIRONMENTAL
PHONE: (724) 550-4190 FAX: (724) 550-4128
400 DIXON BLVD.
UNIONTOWN, PA 15401

LOCATION MAP
BW-8151
Dominion Energy
August 05, 2019
West Milford Quad
Quad Section 7
Scale: 1" = 2000'





☀️ 47-33-05291
☀️ 47-33-05737



WEST VIRGINIA COORDINATE SYSTEM SOUTH ZONE		
NAD 27	NAD 83	UTM (NAD 83)
N: 238845.18 E: 1718342.88 LAT: 39°09'05.38" LON: 80°29'34.71"	N: 238882.55 E: 1688902.82 LAT: 39°09'05.71" LON: 80°29'34.76"	N: 14218216.23 E: 1784148.68

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NUMBER: WV-

DRAWING NUMBER: BW-8151 PLAT.DWG

SCALE: 1"=400'

MINIMUM DEGREE OF ACCURACY: SUBMETER

PROVEN SOURCE OF ELEVATION: DGPS (SUBMETER MAPPING GRADE)

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION

Jeffrey N. Waggett
JEFFREY N. WAGGETT, WV P.E. #22316
POLESTAR ENGINEERING
400 DIXON BLVD., UNIONTOWN, PA 15401
PHONE: 724-550-4190



RECEIVED
Office of Oil and Gas
AUG - 8 2019
WV Department of Environmental Protection

DATE: APRIL 18, 2019

OPERATORS WELL NO.: BW-8151

API WELL NO.: 47 033 01594
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL IF "GAS": PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION: 1147 FT. WATERSHED: MIDDLE WEST FORK RIVER DISTRICT: UNION COUNTY: HARRISON QUADRANGLE: WEST MILFORD

SURFACE OWNER: DONNA LEE DAVIS ACREAGE: 64.00

OIL AND GAS ROYALTY OWNER: 0 LEASE ACREAGE: 0

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION

PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG

OTHER PHYSICAL CHANGE IN WELL (SPECIFY) CONVERT STORAGE/PRODUCTION WELL TO STORAGE/OBSERVATION WELL

TARGET FORMATION: GANTZ ESTIMATED DEPTH: 1928-1946 FT.

WELL OPERATOR: DOMINION ENERGY TRANSMISSION INC. DESIGNATED AGENT: JOHN LOVE

ADDRESS: 925 WHITE OAKS BLVD. ADDRESS: 925 WHITE OAKS BLVD.

BRIDGEPORT, WV 28330 ADDRESS: BRIDGEPORT, WV 28330

LON: 80°29'34.75"

9884'

LATITUDE 39°10'00"

TERENCE L WASHBURN
17-20-423-26

JAMES C GARRETT
17-20-423-27

EDITH J DALLAS
17-20-443-22-01

Donna Lee Davis
TM 17-20-443-0011
54 Acres

EDITH J DALLAS
17-20-443-22-01

EXISTING WELL
NO. BW-8151
47-033-01594

47-33-05291
47-33-05737

TOP HOLE
7.5' SPOT

DONNA L DAVIS
17-20-443-0012-02

JOSEPH & ASHLEY E SAYRES
17-20-443-29-01

JOSEPH G DAVIS
17-20-443-0012

WEST VIRGINIA COORDINATE SYSTEM
NORTH ZONE

NAD 27	NAD 83	UTM Zone 17 North (NAD 83)	
N: 238845.16	N: 238882.55	Feet	Meters
E: 1718342.86	E: 1686902.82	N: 14218216.23	N: 4333712.31
LAT: 39°09'05.38"	LAT: 39°09'05.71"	E: 1784148.58	E: 543808.49
LON: 80°29'35.41"	LON: 80°29'34.75"		

⊕ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NUMBER: WV-

DRAWING NUMBER: BW-8151 PLAT.DWG

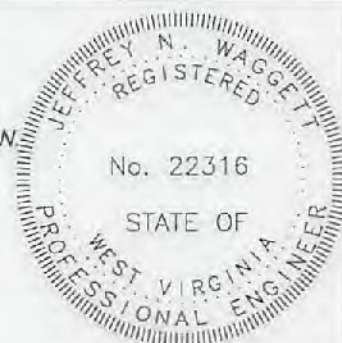
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JEFFREY N. WAGGETT, WV P.E. #22316
POLESTAR ENGINEERING
400 DIXON BLVD., UNIONTOWN, PA 15401
PHONE: 724-550-4190



DATE: JULY 22, 2019

OPERATORS WELL NO.: BW-8151

API WELL NO.: 47 033 01594
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS



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BRIDGEPORT, WV 26330 BRIDGEPORT, WV 26330

HARRISON COUNTY PERMIT 03089