Dominion Resources Services, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060

Web Address: www.dom.com

December 19, 2016

BY U.S. MAIL RETURN RECEIPT REQUESTED
7015 0640 0001 0352 4406

Mr. William F. Durham
Director, Division of Air Quality
West Virginia Division of Environmental Protection
601 57th Street
Charleston, WV 25304

Subject: Class II Administrative Update Application (45CSR13) and Significant Modification Application (Revision to Title V)
Dominion Transmission, Inc.
L.L. Tonkin Compressor Station (Facility ID#017-00003)

Dear Mr. Durham:

Attached is an application for the use of significant modification procedures to revise Title V permit R30 01700003-2015 for the Dominion Transmission, Inc. L.L. Tonkin Compressor Station, located in Doddridge County, West Virginia. This application consists of a Regulation 13 application package which corrects information for the emergency generator and boiler installed during the previous permit modification.

After the project, the Station will continue to be classified as a major source under Title V regulations (annual potential emissions of CO are more than 100 tons per year). The Station's potential to emit is less than Prevention of Significant Deterioration (PSD) thresholds. This application package includes:

1. Description of changes, and any new specific applicable requirements;

2. Certification of information; and

3. Check in the amount of $1,300 for application fees.

Although the emergency generator included in this application is subject to New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP), there are no changes to the NSPS or NESHAP requirements based on this application. The NSPS application fee is included with this application for WVDEP's review of these requirements.

Should you have any questions or need additional information, please feel free to contact T.R. Andrake at (804) 273 2882 or via email at Thomas.R.Andrake@dom.com.

Sincerely,

Amanda B. Tornabene
Director, Energy Infrastructure Environmental Services

cc: T.R. Andrake, Dominion

tra

APPLICATION FOR 45 CSR 13
MODIFICATION PERMIT
AND
TITLE V PERMIT MODIFICATION

Dominion Transmission, Inc.
L.L. Tonkin Compressor Station
Doddridge County, West Virginia
Title V Permit No. R30-01700003-2015
Permit No. R13-1077A

December 2016

Table of Contents

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

APPLICATION FOR NSR PERMIT AND TITLE V PERMIT REVISION (OPTIONAL)

PLEASE CHECK ALL THAT APPLY TO **NSR (45CSR13)** (IF KNOWN):

☐ **CONSTRUCTION** ☐ **MODIFICATION** ☐ **RELOCATION**
☐ **CLASS I ADMINISTRATIVE UPDATE** ☐ **TEMPORARY**
☒ **CLASS II ADMINISTRATIVE UPDATE** ☐ **AFTER-THE-FACT**

PLEASE CHECK TYPE OF **45CSR30 (TITLE V)** REVISION (IF ANY):

☐ **ADMINISTRATIVE AMENDMENT** ☐ **MINOR MODIFICATION**
☒ **SIGNIFICANT MODIFICATION**

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS **ATTACHMENT S** TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant *(as registered with the WV Secretary of State's Office):*
Dominion Transmission, Inc.

2. Federal Employer ID No. ***(FEIN):***
550629203

3. Name of facility *(if different from above):*
L.L. Tonkin Compressor Station

4. The applicant is the:
☐ **OWNER** ☐ **OPERATOR** ☒ **BOTH**

5A. Applicant's mailing address:
Dominion Transmission, Inc.
925 White Oaks Blvd.
Bridgeport, WV 26330

5B. Facility's present physical address:
Tonkin Station Road
West Union, West Virginia 26456

6. **West Virginia Business Registration.** Is the applicant a resident of the State of West Virginia? ☒ **YES** ☐ **NO**

- If **YES,** provide a copy of the **Certificate of Incorporation/Organization/Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A.**
- If **NO,** provide a copy of the **Certificate of Authority/Authority of L.L.C./Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A.**

7. If applicant is a subsidiary corporation, please provide the name of parent corporation: Dominion Resources, Inc.

8. Does the applicant own, lease, have an option to buy or otherwise have control of the *proposed site?* ☒ **YES** ☐ **NO**

- If **YES,** please explain: Application is for modification of existing natural gas compressor station which Dominion Transmission, Inc. owns and operates.
- If **NO,** you are not eligible for a permit for this source.

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): Natural gas compressor station.

10. North American Industry Classification System **(NAICS)** code for the facility:
486210

11A. DAQ Plant ID No. (for existing facilities only):
017-00003

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):
R30–01700003-2015, R13-1077A

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A.

- For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- For **Construction** or **Relocation permits,** please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

From the town of Parkersburg, take Route 50 East. After approximately 45 miles, take West Union exit (Route 18 North). Travel approximately 3.5 miles and the L.L. Tonkin Compressor Station will be on the left.

12.B. New site address (if applicable):	12C. Nearest city or town: West Union	12D. County: Doddridge
12.E. UTM Northing (KM): 4,351.18	12F. UTM Easting (KM): 518.82	12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility:
Correction of information for one boiler (BLR02) and one emergency generator (AUX02).

14A. Provide the date of anticipated installation or change: Upon permit issuance – If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: / /	14B. Date of anticipated Start-Up if a permit is granted: Expedited

14C. Provide a **Schedule** of the planned **Installation** of/**Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:
Hours Per Day 24 Days Per Week 7 Weeks Per Year 52

16. Is demolition or physical renovation at an existing facility involved? ☒ **YES** ☐ **NO**

17**. Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18**. Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process *(if known).* A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance *(if known).* Provide this information as **Attachment D.**

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan,** e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to ***Plot Plan Guidance***) **.**

– Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F.**

23. Provide a **Process Description** as **Attachment G.**

– Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H.**

– For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I.**

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J.**

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K.**

28. Check all applicable **Emissions Unit Data Sheets** listed below:

☐ Bulk Liquid Transfer Operations	☐ Haul Road Emissions	☐ Quarry
☐ Chemical Processes	☐ Hot Mix Asphalt Plant	☐ Solid Materials Sizing, Handling and Storage Facilities
☐ Concrete Batch Plant	☐ Incinerator	☐ Storage Tanks
☐ Grey Iron and Steel Foundry	☐ Indirect Heat Exchanger	

☒ General Emission Unit, specify: One (1) emergency generator, one (1) boiler.

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L.**

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

☐ Absorption Systems	☐ Baghouse	☐ Flare
☐ Adsorption Systems	☐ Condenser	☐ Mechanical Collector
☐ Afterburner	☐ Electrostatic Precipitator	☐ Wet Collecting System
☐ Other Collectors, specify		

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M.**

30. Provide all **Supporting Emissions Calculations** as **Attachment N,** or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O.**

➢ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and ***Example Legal Advertisement*** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33. **Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

☐ **YES** ☒ **NO**

➢ If **YES,** identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's "***Precautionary Notice – Claims of Confidentiality"*** guidance found in the ***General Instructions*** as **Attachment Q.**

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

☐ Authority of Corporation or Other Business Entity	☐ Authority of Partnership
☐ Authority of Governmental Agency	☐ Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R.**

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned ☒ **Responsible Official** / ☐ **Authorized Representative,** hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE _____ DATE: 12/20/16
(Please use blue ink) *(Please use blue ink)*

35B. Printed name of signee: Cristie D. Neller		35C. Title: Vice President, System Engineering
35D. E-mail: Cristie.D.Neller@dom.com	36E. Phone: 804-771-4190	36F. FAX:
36A. Printed name of contact person (if different from above): T.R. Andrake		36B. Title: Environmental Consultant
36C. E-mail: Thomas.R.Andrake@dom.com	36D. Phone: 804-273-2882	36E. FAX: 804-273-2714

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- ☒ **Attachment A: Business Certificate**
- ☒ **Attachment B: Map(s)**
- ☒ **Attachment C: Installation and Start Up Schedule**
- ☒ **Attachment D: Regulatory Discussion**
- ☒ **Attachment E: Plot Plan**
- ☒ **Attachment F: Detailed Process Flow Diagram(s)**
- ☒ **Attachment G: Process Description**
- ☐ **Attachment H: Material Safety Data Sheets (MSDS)**
- ☒ **Attachment I: Emission Units Table**
- ☒ **Attachment J: Emission Points Data Summary Sheet**
- ☐ **Attachment K: Fugitive Emissions Data Summary Sheet**
- ☒ **Attachment L: Emissions Unit Data Sheet(s)**
- ☐ **Attachment M: Air Pollution Control Device Sheet(s)**
- ☒ **Attachment N: Supporting Emissions Calculations**
- ☒ **Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans**
- ☒ **Attachment P: Public Notice**
- ☐ **Attachment Q: Business Confidential Claims**
- ☐ **Attachment R: Authority Forms**
- ☒ **Attachment S: Title V Permit Revision Information**
- ☒ **Application Fee**

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

- ☐ ***Forward 1 copy of the application to the Title V Permitting Group and:***
- ☐ ***For Title V Administrative Amendments:***
  - ☐ ***NSR permit writer should notify Title V permit writer of draft permit,***
- ☐ ***For Title V Minor Modifications:***
  - ☐ ***Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,***
  - ☐ ***NSR permit writer should notify Title V permit writer of draft permit.***
- ☐ ***For Title V Significant Modifications processed in parallel with NSR Permit revision:***
  - ☐ ***NSR permit writer should notify a Title V permit writer of draft permit,***
  - ☐ ***Public notice should reference both 45CSR13 and Title V permits,***
  - ☐ ***EPA has 45 day review period of a draft permit.***

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Attachment A

Business Certificate

WEST VIRGINIA
STATE TAX DEPARTMENT

BUSINESS REGISTRATION CERTIFICATE

ISSUED TO:
DOMINION TRANSMISSION INC
445 W MAIN ST
CLARKSBURG, WV 26301-2843

BUSINESS REGISTRATION ACCOUNT NUMBER: **1038-3470**

This certificate is issued on: 06/8/2011

This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code

The person or organization identified on this certificate is registered to conduct business in the State of West Virginia at the location above.

This certificate is not transferrable and must be displayed at the location for which issued.

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

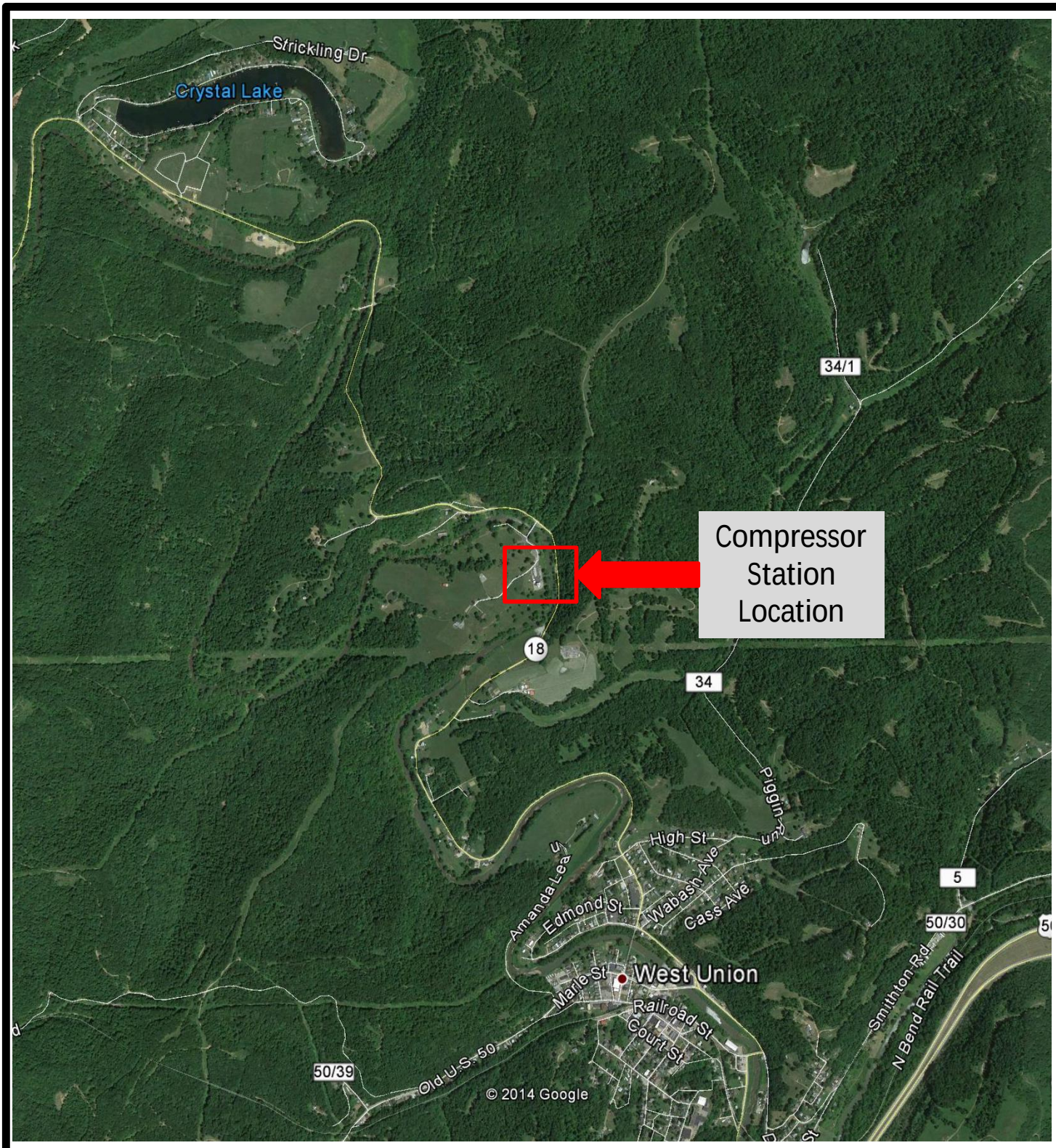
Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.

atL006 v.4
L0228957312

Attachment B

Map



From the town of Parkersburg, take Route 50 East. After approximately 45 miles, take West Union exit (Route 18 North). Travel approximately 3.5 miles and the L.L. Tonkin Compressor Station will be on the left.

	Attachment B
Date: December 2016	Facility Map L.L. Tonkin Compressor Station

Attachment C

Installation and Start Up Schedule

Installation and Start Up Schedule

Emission Point	Change[1]	Effective date of change	Start Up Date
AUX02 Caterpillar Generator	Modification	Upon permit issuance	Expedited
BLR02 Hurst Boiler	Modification	Upon permit issuance	Expedited

1. Equipment originally permitted in R13-1077A. Equipment expected to be installed when final permit is issued with start-up upon completion of construction. Application being submitted to update each unit's make, model, and capacity based on equipment purchased.

Attachment D

Regulatory Discussion

1.0 INTRODUCTION

1.1 Summary and Conclusions

Dominion Transmission, Inc. (DTI) operates the L.L. Tonkin Compressor Station (the "Station") under Title V Permit No. R30-01700003-2015. This application package contains DTI's application to correct information for the previously permitted emergency generator (AUX02) and boiler (BLR02). In addition, this application is being submitted to modify the Station's Title V permit to reflect these changes.

An analysis of federal and state regulations was performed to identify applicable air quality regulations. Through this modification, there are no changes to applicable regulations for AUX02 and BLR02.

1.2 Report Organization

The proposed Project is described in Section 2.0. An analysis of applicable regulations and proposed compliance procedures is presented in Section 3.0. Completed permit application forms, including emissions estimating basis, emission calculations and supporting data are contained within this application package.

2.0 PROJECT DESCRIPTION

2.1 Description of Existing Facility

The L.L. Tonkin Compressor Station is located off Route 18 in Doddridge County, WV. Through the Title V permit modification issued August 17, 2015, the Station was upgraded to increase the natural gas throughput of the existing downstream mainline by boosting the pressure of the natural gas up to the current maximum allowable operating pressure (MAOP) of 1,200 pounds per square inch gauge (psig) to move gas south to Cornwell Station.

The Station is covered by Standard Industrial Classification (SIC) 4922 and operates under Title V Permit No. R30-01700003-2015. The Station has the potential to operate seven (7) days per week, twenty-four (24) hours per day. Compression equipment at the Station currently consists of three Solar combustion turbine compressors. Auxiliary equipment at the Station includes one 169-hp natural gas-fired Cummins emergency generator, one 0.52-million British thermal unit per hour (MMBtu/hr) boiler, and numerous storage tanks for various low vapor pressure liquids. A plot plan of the Station is provided as Attachment E.

Based on potential annual emissions as listed in Title V Fact Sheet R30-01700003-2015 (shown below in Table 2-1), the existing station is classified as a major source of CO under Title V regulations.

Table 2-1 Existing Station Potential Annual Emissions (tpy)

Source	NO_x	CO	VOC	SO_2	PM_{10} / $PM_{2.5}$	CH_2O	Total HAP
Facility-Wide	80.3	122.1	13.9	0.67	13.0	0.94	2.04

Doddridge County is classified as attainment or unclassifiable for all National Ambient Air Quality Standards. The proposed Project will remain below all applicable major source thresholds and as such will not trigger permitting associated with either PSD or nonattainment NSR.

2.2 Proposed Modification

DTI is preparing to install an emergency generator and boiler which exceed the permitted capacities in R13-1077A. DTI originally proposed to:

- Add one new 600-hp Caterpillar emergency generator; and
- Add one new 1.75-MMBtu/hr Ajax boiler.

DTI is updating each unit's make, model, and capacity through this modification. The new equipment will include:

- One new 1,462-hp Caterpillar emergency generator; and
- One new 2.940-MMBtu/hr Hurst boiler.

Potential emissions for the emergency generator are based on operation of up to 500 hours per year. Emissions from this unit are based on vendor data for NO_x, CO, VOC, and CH_2O and AP-42 emission

factors for other air pollutants. Potential emissions from the boiler are based on AP-42 emission factors. No other changes to Station equipment are currently being proposed.

The equipment is expected to be installed when the final permit is issued. Initial commercial operation will commence upon completion of construction.

Table 2-2 Emission Rates for Proposed Equipment During Normal Operation (lb/hr)[1]

Emission Point ID	Make	Basis	NO_x	CO	VOC	SO_2[2]	PM_{10} / $PM_{2.5}$	CH_2O
AUX02	Caterpillar	1,462 HP	6.45	6.19	1.74	1.17E-02	*0.13*	1.00
BLR02	Hurst	2.940 MMBtu/hr	*0.29*	*0.24*	*0.016*	2.73E-03	*0.022*	*2.16E-04*

[1] Based on vendor performance data; values in italics based on AP-42 emission factors.

[2] Based on 0.33 grains sulfur per 100 standard cubic feet of natural gas.

3.0 REGULATORY ANALYSIS AND COMPLIANCE METHODS

This section reviews the applicability of state and federal regulations affecting the revised equipment. Supporting calculations are included in Attachment N.

3.1 Prevention of Significant Deterioration

Prevention of Significant Deterioration requirements apply to projects that have the potential to increase annual emissions beyond defined significance levels. This potential is evaluated as a two-step process. First, any emission increase associated with the project itself is evaluated. If the project will result in a significant emission increase (as defined at 40 CFR §52.21(b)(23)), then the net emission increase, considering all contemporaneous equipment changes must be evaluated.

Potential annual emissions associated with this application and the Station are summarized in Attachment N. As shown, the Station's PTE does not exceed 250 tons per year for any PSD-regulated pollutant. Therefore, the original Project and this permit modification are not subject to PSD requirements, and no net emission change calculations are necessary.

3.2 New Source Performance Standards

New Source Performance Standards (NSPS) apply to new, modified or reconstructed stationary sources meeting criteria established in 40 CFR Part 60.

Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units) applies to steam generating units with a maximum design heat input capacity of greater than or equal to 10 MMBtu/hr, but less than or equal to 100 MMBtu/hr, which are constructed, modified or reconstructed after June 9, 1989. Steam generating units are defined as devices that combust fuel and heat water or any heat transfer medium. Since the proposed boiler will be rated at 2.94 MMBtu/hr, this NSPS is not applicable.

Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines) applies to stationary spark ignition engine manufacturers and owners/operators. For natural gas-fired emergency engines manufactured after January 1, 2009, the applicable emission limits for engines greater than 130 hp rated capacity are as follows.

- For NO_x, the limit is 2.0 g/hp-hr or 160 ppmvd at 15 percent O_2;
- For CO, the limit is 4.0 g/hp-hr or 540 ppmvd at 15 percent O_2; and
- For VOC, the limit is 1.0 g/hp-hr or 86 ppmvd at 15 percent O_2.

The proposed emergency generator will be subject to the Subpart JJJJ emission limits for engines greater than 130 hp. Based on manufacturer data, as supplied in Appendix N, the engine will comply with these emission limits.

3.3 National Emission Standards for Hazardous Air Pollutants

National Emission Standards for Hazardous Air Pollutants (NESHAPs) are promulgated under 40 CFR Part 63 for specific processes and HAP emissions. Subpart DDDDD (Boilers) is only applicable to major sources of HAPs; therefore, it is not applicable to the Station (minor, or "area," source of HAPs). Subpart ZZZZ (Stationary Reciprocating Internal Combustion Engines) is applicable to the proposed emergency generator; however, for this source type, Subpart ZZZZ requirements are met by complying with NSPS Subpart JJJJ as described above.

3.4 West Virginia Division of Air Quality Regulations (CSR Title 45)

West Virginia CSR Title 45 specifies requirements for air pollution sources. Because the potential increase in emissions from the original Project and this permit modification do not exceed PSD significance levels, the Project is classified as a minor modification to the existing station for PSD purposes and is subject to the permitting requirements in 45 CSR 13.

The requirement for new or modified sources to make application to the WVDEP is provided in 45 CSR 13 (Permits for Construction, Modification, Relocation, and Operation of Stationary Sources of Air Pollutants) – Regulation 13. In accordance with 45 CSR 13-2.17, for this application to be considered a modification, the emissions increase of the project must have the potential to exceed any of the following:

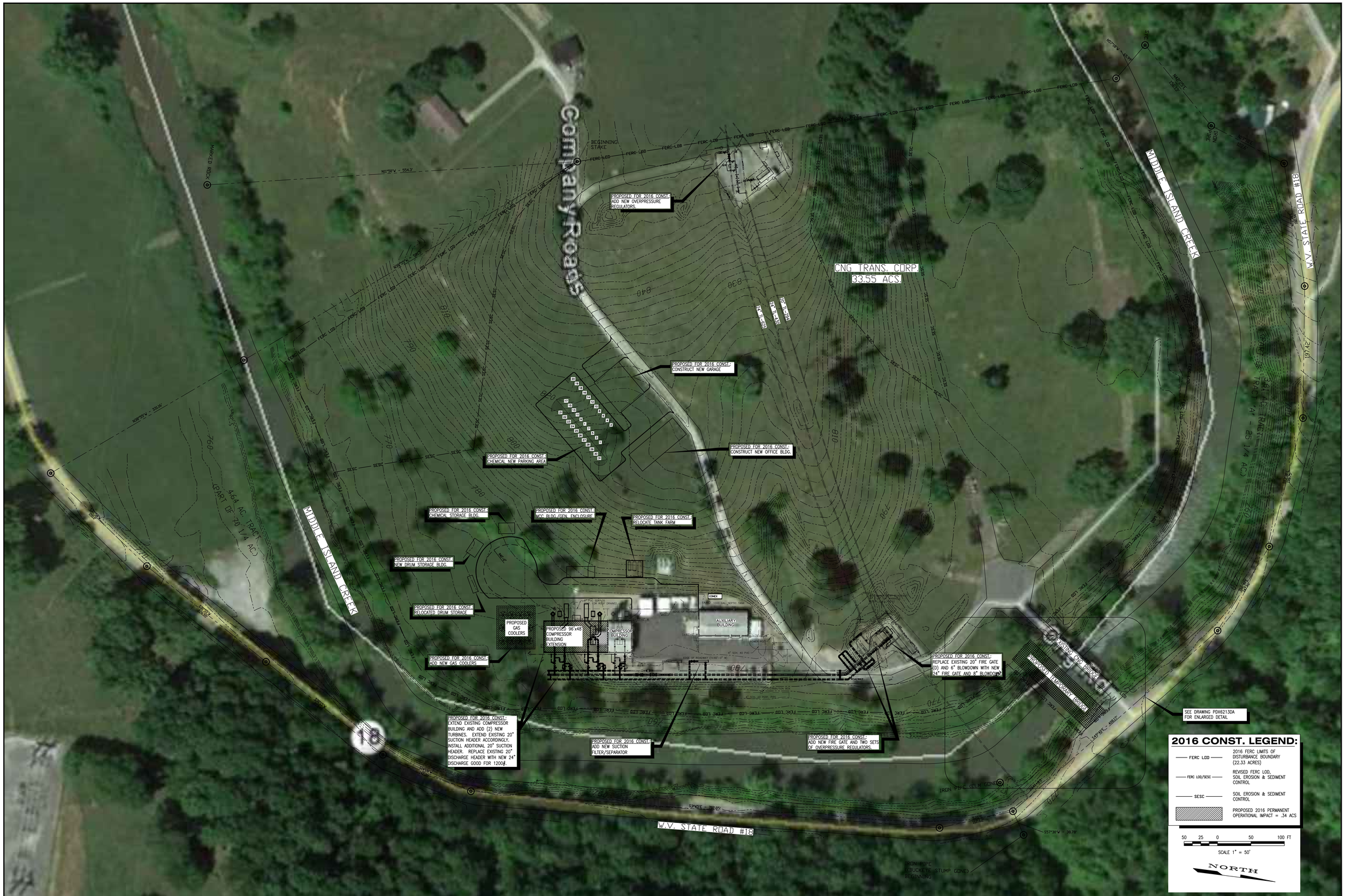
- 6 lbs/hr and 10 tons/yr of any regulated pollutant; or
- 144 lbs/day of any regulated pollutant; or
- 2 lbs/hr or 5 tons/yr of hazardous air pollutants (HAPs).

Since the proposed changes in emissions from the ratings of the Emergency Generator (AUX02) and the Boiler (BRL02) do not exceed any of the above threshold levels, this permit action will be considered a Class II Administrative Update to the existing Regulation 13 permit (R13-1077A).

In addition, there are no changes to the applicable CSR Title 45 requirements for these sources based on the changes proposed in this application from the original Project.

Attachment E

Plot Plan



GENERAL NOTES AND COMMENTS:

SYM.	DATE	BY	REVISION INFORMATION	PROJECT/TASK	APP.
7	1/7/16	RWH	ADDED PROPOSED INFORMATION FROM HGA DRAWING, REVISED SESC LINE AND REMOVED "REVISED FERC LOD" LINE AT BRIDGE LOCATION		
6	3/13/15	RWH	ADDED NORTH ARROW AND SCALE BAR		
5	3/9/15	RWH	REVISED LOD LIMITS AND ADDED ORIGINAL FERC LOD		
4	2/23/15	RWH	ADDED CONTOURING FROM I3 ENGINEERING SURVEY, REVISED LOD LIMITS		
3	1/30/15	RWH	REVISED LOD LIMITS		
2	09/24/2014	PWB	REMOVED ADDITIONAL LOD FOR CREEK CROSSING; ADDED LOD FOR TEMPROARY BRIDGE		
1	09/04/2014	CMD	ADDED ADDITIONAL LOD FOR CREEK CROSSING		

SEAL

ORIGINAL CONSTRUCTION INFORMATION

PROJECT/TASK:		
DRAWN:	PWB	07/29/14
CHECKED:		
APP. FOR BID:		
APP. FOR CONST.:		
SCALE:	1" = 50'	

Dominion Transmission, Inc.
445 West Main St. Clarksburg, West Virginia 26301 / Phone: (304) 623-8000

FOR: MONROE TO CORNWELL PROJECT

TITLE: PLOT PLAN – LL TONKIN STATION SHOWING PROPOSED 2016 CONSTRUCTION

TOWN: | COUNTY: DODDRIDGE, WV | GROUP: PD | DWG. NO.: E6213D | REV.: i

DIR/FILE:

Printed: Jan 07, 2016 @10:19, By: roy0092, Filename: PDE62130 rev 1.dwg

NORTH

PROPOSED (2016) COMPRESSOR BUILDING EXTENSION

EXISTING COMPRESSOR BUILDING

PROPOSED (2016) TURBINE 3 — D4.1C

PROPOSED (2016) TURBINE 2 — D4.1B

1 — D4.1A

VENT SILENCER

ORIFICE FLANGE

12" VENT HEADER

16" DISCHARGE

6" 6"x4" R.V.

4"

STRAIGHTENING VANES

16" SUCTION

8" 8"x6" FCV 2"

PROPOSED NEW 24" SUCTION

PROPOSED NEW 30" SUCTION

PROPOSED NEW 24" DISCHARGE

12"x6"

1" FUEL GAS LINE TO AUXILIARY BUILDING

3" FUEL GAS LINE

2" FUEL GAS LINE

3"x2"

SUCTION SCRUBBER D8.3A

SUCTION FILTER/SEPARATOR D8.2B

SUCTION FILTER/SEPARATOR D8.2A

24" SUCTION

30" SUCTION

STRAIGHTENING VANES

SR. ORIFICE

GAS COOLERS PROPOSED (2016)

PROPOSED FOR 2016 CONST.:
REMOVE SUCTION SCRUBBER; ADD (2) NEW SUCTION FILTER/SEPARATORS

PROPOSED FOR 2016 CONST.:
REPLACE EXISTING 20" SUCTION HEADER WITH NEW 24"; ADD NEW 30" SUCTION HEADER. REPLACE EXISTING 20" DISCHARGE WITH NEW 24"

PROPOSED FOR 2016 CONST.:
NEW RECYCLE VALVES

MAOP 990 / MAOP 1200

GA–442

20" TL–265 MAOP 500#

24" TL–430 MAOP 1200#

16" TL–589 MAOP 720#

TO OXFORD STATION – EMERGENCY ONLY

20" TL–294

REGULATION BUILDING

16"x6"

4" 600# B.V.

4"x3" PRIMARY MONITOR

6" 600# C.V.'S

4" 600# SICK ULTRASONIC METER

8"x4"

20" METER

24" METER

MAOP 1200 / MAOP 1200

MONITOR PRIMARY

TL–430 TL–625

24" TL–625 MAOP 1200#

2016 CONST.:
ALL WORK AT GA–442, INCLUDING NEW METER RUNS, VALVING, AND OVERPRESSURE REGULATION TO BE DESIGNED BY DTI.

GA–443

PROPOSED FOR 2016 CONST.:
NEW REGULATORS: FLOW CONTROL WITH PRESSURE OVERRIDE.

PROPOSED FOR 2016 CONST.:
NEW 24" FIRE GATE AND STATION BLOWDOWN

PROPOSED FOR 2016 CONST.:
NEW 24" JUMPER WITH NEW VALVE AND ISOLATOR

PROPOSED FOR 2016 CONST.:
NEW 30" FIRE GATE AND STATION BLOWDOWN

PROPOSED FOR 2016 CONST.:
REMOVE EXISTING VALVES "F" AND "G" AND 20" PIPING. INSTALL CAP AT TEE ON TL–294

PROPOSED FOR 2016 CONST.:
NEW OPP REGULATORS, 24" FIRE GATE, AND (2) 8" STATION BLOWDOWNS

PROPOSED FOR 2016 CONST.:
REPLACE EXISTING 20" DISCHARGE LINE WITH NEW 24" DISCHARGE LINE.

PROPOSED FOR 2016 CONST.:
REPLACE EXISTING 20" SUCTION LINE WITH NEW 30" SUCTION LINE.

20" TL–294

24"x20"

NEW 24"

24" TL–430

MAOP 990#

20" POT DRIP

NEW 20" CAP

PREFABRICATED LAUNCHER/RECEIVER

8" INSUL FLG.

8" CLOSURE

12"x8"

8" KICKER LINE

8" HINGED CLOSURE

24"x20" ECC.

30"x24"

15" B.O. SHAFER OPER.

6" B.O. SHAFER OPER.

FIRE GATE

16"x10"

24" ISO

NEW 30"

24" TL–625 MAOP 1200#

24" ISOLATOR

12"x6"

6" CLOSURE

MAOP 990 / MAOP 1200

PRIMARY MONITOR

5" B.O. SHAFER OPER.

PROPOSED NEW 24" SUCTION

PROPOSED NEW 30" SUCTION

2" FUEL GAS LINE

PROPOSED NEW 24" DISCHARGE

CONCEPT LEGEND:

- PROPOSED NEW FACILITIES FOR 2016 CONSTRUCTION (DESIGN BY HGA)
- EXISTING FACILITIES
- PROPOSED NEW FACILITIES FOR 2016 CONSTRUCTION (DESIGN BY DTI)
- PROPOSED EXISTING PIPING TO BE REMOVED IN 2016

GENERAL NOTES AND COMMENTS:

SYM.	DATE	BY	REVISION INFORMATION	PROJECT/TASK	APP.
4	04/30/15	PWB	INCREASED SIZE OF EXISTING SUCTION LINE FROM 20" TO 30"; INCREASED SIZE OF NEW SUCTION LINE FROM 20" TO 24"; REPLACE EXISTING SUCTION FILTER		
3	04/21/15	PWB	REMOVED GA–442 WORK FROM HGA SCOPE; CHANGED PURPOSE OF GATES D AND F; REVISED PURPOSE AND LOCATION OF REGULATORS		
2	08/08/14	PWB	ADDED NEW 20" SUCTION; RECYCLE VALVES; OPP REGULATION		
1			PRELIMINARY		

SEAL

ORIGINAL CONSTRUCTION INFORMATION

PROJECT/TASK:		
DRAWN:	PWB	07/29/14
CHECKED:		
APP. FOR BID:		
APP. FOR CONST.:		
SCALE:	NONE	

Dominion Transmission, Inc.

445 West Main St. Clarksburg, West Virginia 26301 / Phone: (304) 623–8000

FOR: MONROE TO CORNWELL PROJECT

TITLE: CONCEPT – PROPOSED ADDITIONS TO EXISTING LL TONKIN STATION

TOWN: | COUNTY: | GROUP: SC | DWG. NO.: E6213C | REV.: e

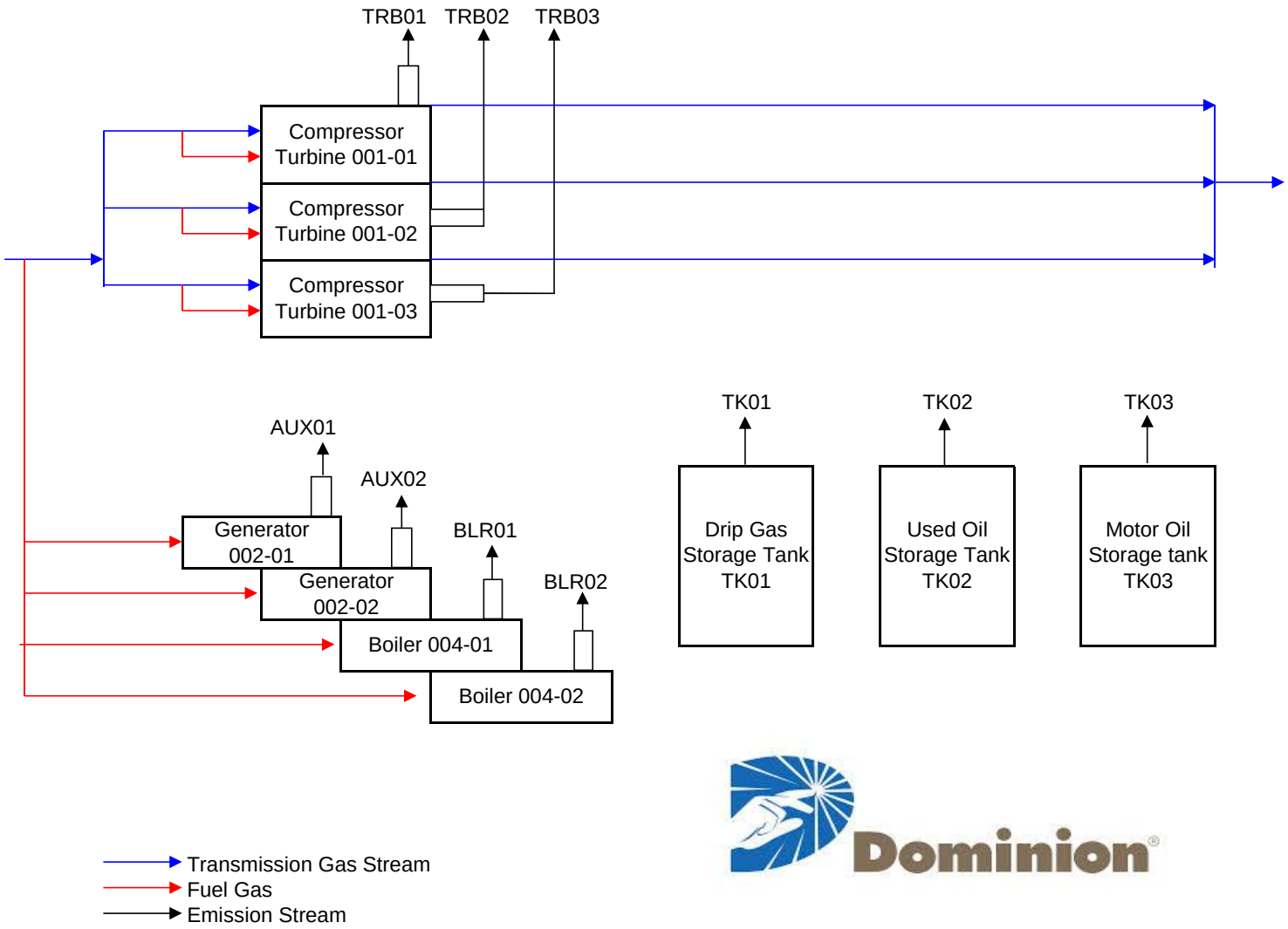
DIR/FILE:

Printed: Jan 07, 2016 @10:39, By: roy0092, Filename: SCE6213C rev e.dwg

Attachment F

Detailed Process Flow Diagram

ATTACHMENT F
L.L. TONKIN COMPRESSOR STATION PROCESS FLOW DIAGRAM



Attachment G

Process Description

Process Description

Pipeline transmission of natural gas requires that the gas be compressed. The L.L. Tonkin Compressor Station uses Solar turbine-driven compressors for natural gas transmission. Current auxiliary equipment at this facility consists of one (1) 169-horsepower (hp) natural gas-fired auxiliary generator, one (1) 0.52-MMBtu/hr natural gas-fired boiler, and numerous tanks used for the storage of various liquids.

This application updates information previously provided for one natural gas-fired emergency generator and one natural gas-fired boiler to be added to the facility. Additional information on emissions from the updated equipment is provided in Attachment N to this application. A comparison of permitted equipment and proposed equipment is provided in the table below.

Emission Unit ID	Emission Point ID	Permitted Equipment Being Replaced through this R13 Modification		Equipment to be Installed	
		Emission Unit Description	Design Capacity	Emission Unit Description	Design Capacity
002-02	AUX02	Caterpillar CG137-12 Generator Set	600 bhp	Caterpillar G3516 Emergency Generator	1,462 bhp
004-02	BLR02	Ajax WRF-1750 Boiler	1.75 MMBtu/hr	Hurst LPW-G-70-60W Boiler	2.94 MMBtu/hr

Attachment I

Emission Units Table

Attachment I

Emission Units Table

(includes all emission units and air pollution control devices that will be part of this permit application review, regardless of permitting status)

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type[3] and Date of Change	Control Device[4]
002-02	AUX02	Caterpillar G3516 Emergency Generator	2016	1,462 HP	Modification, 2016	-
004-02	BLR02	Hurst LPW-G-70-60W Boiler	2016	2.94 MMBtu/hr	Modification, 2016	-

There are no changes to the units associated with the following emission point IDs at the Station: TRB01, AUX01, BLR01, TK01, TK02, TK03, TRB02, and TRB03. Therefore, they have not been included in this Attachment or Attachment J.

[1] For Emission Units (or Sources) use the following numbering system:1S, 2S, 3S,... or other appropriate designation.
[2] For Emission Points use the following numbering system:1E, 2E, 3E, ... or other appropriate designation.
[3] New, modification, removal
[4] For Control Devices use the following numbering system: 1C, 2C, 3C,... or other appropriate designation.

Attachment J

Emission Points Data Summary Sheet

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 1: Emissions Data

Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions[4]		Maximum Potential Controlled Emissions[5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used[6]	Emission Concentration[7] (ppmv or mg/m^3)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
AUX02	Upward Vertical	002-02		-		-	-	NO_x	6.45	1.61			Gas	EE	
								CO	6.19	1.55			Gas	EE	
								VOC	1.74	0.44			Gas	EE	
								SO_2	0.01	0.003			Gas	EE	
								PM	0.13	0.03			Solid	EE	
								CH_2O	1.00	0.25			Gas	EE	
BLR02	Upward Vertical	004-02		-		-	-	NO_x	0.29	1.26			Gas	EE	
								CO	0.24	1.06			Gas	EE	
								VOC	0.02	0.07			Gas	EE	
								SO_2	0.003	0.012			Gas	EE	
								PM	0.02	0.10			Solid	EE	
								CH_2O	0.0002	0.0009			Gas	EE	

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

[1] Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

[2] Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

[3] List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. **LIST** Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, all applicable Greenhouse Gases (including CO_2 and methane), etc. **DO NOT LIST** H_2, H_2O, N_2, O_2, and Noble Gases.

[4] Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[5] Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[6] Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

[7] Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m^3) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO_2, use units of ppmv (See 45CSR10).

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 2: Release Parameter Data								
Emission Point ID No. *(Must match Emission Units Table)*	Inner Diameter (ft.)	Exit Gas			Emission Point Elevation (ft)		UTM Coordinates (km)	
		Temp. (^{o}F)	Volumetric Flow [1] (acfm) *at operating conditions*	Velocity (fps)	Ground Level *(Height above mean sea level)*	Stack Height [2] *(Release height of emissions above ground level)*	Northing	Easting
AUX02	0.67	886	8,303	396.44	780	25	4,351.18	518.82
BLR02	1.00	300 (estimate)	755 (estimate)	16.02 (estimate)	780	25 (estimate)	4,351.18	518.82

[1] Give at operating conditions. Include inerts.
[2] Release height of emissions above ground level.

Attachment L

Emissions Unit Data Sheets

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 002-02

1. Name or type and model of proposed affected source:

   Caterpillar G3516 emergency generator. Emission point AUX02.

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

   The emergency generator will consume approximately 12,383 scf/hr of natural gas based on calculations of Caterpillar engines provided information.

4. Name(s) and maximum amount of proposed material(s) produced per hour:

   The emergency generator will produce approximately 1,462 brake horsepower operating at full load.

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   Natural gas combustion, generalized as hydrocarbons ignited with oxygen to produce carbon dioxide and water: $CH_4 + O_2 \rightarrow CO_2 + H_2O$

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

Natural gas: 12,383 scf/hr; 6.19 MMscf/yr

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

Proposed fuel is pipeline quality natural gas

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

12.63 MMBtu/hr

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

N/A

(g) Proposed maximum design heat input: 12.63 $\times 10^6$ BTU/hr.

7. Projected operating schedule: 500 hours/yr

Hours/Day	Days/Week	Weeks/Year

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and 14.7 psia

a.	NO_X	6.45	lb/hr	grains/ACF
b.	SO_2	0.012	lb/hr	grains/ACF
c.	CO	6.19	lb/hr	grains/ACF
d.	PM_{10}	0.13	lb/hr	grains/ACF
e.	Hydrocarbons		lb/hr	grains/ACF
f.	VOCs	1.74	lb/hr	grains/ACF
g.	Pb	0	lb/hr	grains/ACF
h.	Specify other(s)			
	CO_2e	1,479	lb/hr	grains/ACF
	Formaldehyde	1.00	lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
Monthly operating hours will be monitored through a non-resettable hour meter. This monthly record will be used to track 12-month rolling operating hours.	Recordkeeping of operating hours per 40 CFR 60 Subpart JJJJ.
REPORTING	TESTING
Reporting per 40 CFR 60 Subpart JJJJ.	Initial and subsequent performance tests per 40 CFR 60 Subpart JJJJ.

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty
N/A

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 004-02

1. Name or type and model of proposed affected source:

   Hurst LPW-G-70-60W boiler. Emission point BLR02.

2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.

3. Name(s) and maximum amount of proposed process material(s) charged per hour:

   The boiler will consume approximately 2,882 scf/hr of natural gas based on calculations of manufacturer provided information.

4. Name(s) and maximum amount of proposed material(s) produced per hour:

   The 2.94 MMBtu/hr rated boiler will produce approximately 2.343 MMBtu/hr output at full load.

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   Natural gas combustion, generalized as hydrocarbons ignited with oxygen to produce carbon dioxide and water: $CH_4 + O_2 \rightarrow CO_2 + H_2O$

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

Natural gas: 2,882 scf/hr; 25.25 MMscf/yr

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

Proposed fuel is pipeline quality natural gas

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

2.940 MMBtu/hr

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

N/A

(g) Proposed maximum design heat input: 2.940 $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	365

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and 14.7 psia

a.	NO_X	0.29	lb/hr	grains/ACF
b.	SO_2	0.003	lb/hr	grains/ACF
c.	CO	0.24	lb/hr	grains/ACF
d.	PM_{10}	0.022	lb/hr	grains/ACF
e.	Hydrocarbons		lb/hr	grains/ACF
f.	VOCs	0.016	lb/hr	grains/ACF
g.	Pb	0	lb/hr	grains/ACF
h.	Specify other(s)			
	CO_2e	344	lb/hr	grains/ACF
	Formaldehyde	0.0002	lb/hr	grains/ACF
			lb/hr	grains/ACF
			lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
No monitoring, recordkeeping, reporting, or testing are proposed for this unit (exempt from NESHAP Subpart JJJJJJ).	
REPORTING	TESTING

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Attachment N

Supporting Emissions Calculations

Dominion Transmission, Inc.
L.L. Tonkin Station

Facility Total PTE

Source	Annual Emissions (tpy)						
	NO_x	CO	PM_{10} / $PM_{2.5}$	VOC	SO_2	CH_2O	Total HAP
Permitted Sources PTE [1]	**80.3**	**122.1**	**13.0**	**13.9**	**0.67**	**0.94**	**2.04**
Updated Sources PTE	**2.87**	**2.61**	**0.13**	**0.50**	**0.015**	**0.25**	**0.36**
Emergency Generator	1.61	1.55	0.03	0.44	0.003	0.25	0.34
Boiler	1.26	1.06	0.10	0.07	0.012	9.47E-04	2.38E-02
Previously Permitted PTE of EG and BLR [2]	0.84	0.94	0.05	0.11	0.01	0.02	0.06
Proposed PTE (Permitted+New-Old)	82.3	123.8	13.1	14.3	0.68	1.17	2.34
Title V Threshold	100	100	100	100	100	10	25
PSD Threshold for New Projects	250	250	250	250	250		

1. Per Title V Fact Sheet R30-01700003-2015.

2. Previously permitted emergency generator (AUX02) and boiler (BLR02).

Dominion Transmission, Inc.
L.L. Tonkin Station

Project PTE

Source	Emission Rate (lb/hr)						
	NO_x	CO	PM_{10} / $PM_{2.5}$	VOC	SO_2	CH_2O	Total HAP
Previously Permitted PTE of EG and BLR [1]	0.82	2.71	0.06	0.30	0.01	0.09	0.19
New Emergency Generator	6.45	6.19	0.13	1.74	0.01	1.00	1.35
New Boiler	0.29	0.24	0.02	0.02	0.003	2.16E-04	5.44E-03
Updated New Sources PTE	**6.73**	**6.43**	**0.15**	**1.76**	**0.014**	**1.00**	**1.36**
Change in PTE of EG and BLR	**5.92**	**3.72**	**0.09**	**1.46**	**0.008**	**0.91**	**1.17**
Exceeds 6 lb/hr or 2 lbs/hr HAP	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Source	Emission Rate (tons/yr)						
	NO_x	CO	PM_{10} / $PM_{2.5}$	VOC	SO_2	CH_2O	Total HAP
Previously Permitted PTE of EG and BLR [1]	0.84	0.94	0.05	0.11	0.01	0.02	0.06
New Emergency Generator	1.61	1.55	0.03	0.44	0.003	0.25	0.34
New Boiler	1.26	1.06	0.10	0.07	0.012	9.47E-04	2.38E-02
Updated New Sources PTE	**2.87**	**2.61**	**0.13**	**0.50**	**0.01**	**0.25**	**0.36**
Change in PTE of EG and BLR	**2.03**	**1.66**	**0.08**	**0.39**	**0.01**	**0.23**	**0.30**
Exceeds 10 tons/yr or 5 tons/yr HAP	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Source	Emission Rate (lb/day)						
	NO_x	CO	PM_{10} / $PM_{2.5}$	VOC	SO_2	CH_2O	Total HAP
Previously Permitted PTE of EG and BLR [1]	19.57	65.05	1.39	7.21	0.15	2.23	4.63
New Emergency Generator	154.71	148.52	3.03	41.77	0.28	23.98	32.50
New Boiler	6.92	5.81	0.53	0.38	0.07	0.01	0.13
Updated Sources PTE	**161.63**	**154.33**	**3.55**	**42.15**	**0.348**	**23.99**	**32.63**
Change in PTE of EG and BLR	**142.06**	**89.29**	**2.17**	**34.94**	**0.20**	**21.76**	**28.00**
Exceeds 144 lb/day	**No**	**No**	**No**	**No**	**No**	**No**	**No**

1. Previously permitted emergency generator (AUX02) and boiler (BLR02).

Dominion Transmission, Inc.
L.L. Tonkin Station

Caterpillar G3516 Emergency Generator

Horsepower	1,462	HP
Brake Specific Fuel Consumption	7,783	Btu/Bhp-hr (LHV)
Total Heat Input	11.38	MMBtu/hr (LHV)
	12.63	MMBtu/hr (HHV) [LHV * 1.11]
Operating Hours	500	hr/yr
Natural Gas Heat Content	1,020	Btu/scf
Fuel Consumption	6.19	MMscf/yr
	12,383	scf/hr

Pollutant	Emission Factor		Emission Rate		Emission Factor Reference
	g/bhp-hr	lb/MMBtu	lb/hr	ton/yr	
NO_x	2.00		6.45	1.61	Vendor Data
CO	1.92		6.19	1.55	Vendor Data
CO_2e		117.1	1,479	370	40 CFR 98 Subpart C
PM_{10}		0.010	0.13	0.03	AP-42 Table 3.2-2 (7/00) - 4SLB
$PM_{2.5}$		0.010	0.13	0.03	AP-42 Table 3.2-2 (7/00) - 4SLB
VOC [1]	0.54		1.74	0.44	Vendor Data
SO_2		0.00093	1.17E-02	2.94E-03	0.33 grains S / 100 scf [2]
Formaldehyde	0.31		1.00	0.25	Vendor Data
Total HAPs		0.10721	1.35	0.34	AP-42 Table 3.2-2 (7/00) - 4SLB & Vendor Data

1. VOC emission factor was derived by adding the non-methane, non-ethane hydrocarbon (NMNEHC) emission factor (which does not include aldehydes) and the formaldehyde emission factor provided by the vendor.
2. Based on current Title V permit.

Dominion Transmission, Inc.
L.L. Tonkin Station

Hurst Boiler - LPW-G-70-60W

Heat Input	2.94	MMBtu/hr
Operating Hours	8,760	hr/yr
Natural Gas Heat Content	1,020	Btu/scf
Fuel Consumption	25.25	MMscf/yr
	2,882	scf/hr

Pollutant	Emission Factor		Emission Rate		Emission Factor Reference
	lb/MMscf	lb/MMBtu	lb/hr	ton/yr	
NO_x	100	0.098	0.29	1.26	AP-42 Table 1.4-1 (7/98)
CO	84	0.082	0.24	1.06	AP-42 Table 1.4-1 (7/98)
CO_2e		117.1	344	1,508	40 CFR 98 Subpart C
PM_{10}	7.6	0.007	0.022	0.10	AP-42 Table 1.4-2 (7/98)
$PM_{2.5}$	7.6	0.007	0.022	0.10	AP-42 Table 1.4-2 (7/98)
VOC	5.5	0.005	0.016	0.07	AP-42 Table 1.4-2 (7/98)
SO_2		0.00093	2.73E-03	1.20E-02	0.33 grains S / 100 scf [1]
Formaldehyde	0.075	0.00007	2.16E-04	9.47E-04	AP-42 Table 1.4-3 (7/98)
Total HAPs	1.89	0.00185	5.44E-03	2.38E-02	AP-42 Table 1.4-3 & 4 (7/98)

1. Based on current Title V permit.

G3516

GAS ENGINE TECHNICAL DATA

CATERPILLAR®

ENGINE SPEED (rpm):	1800	RATING STRATEGY:	STANDARD
COMPRESSION RATIO:	11	APPLICATION:	GENSET
AFTERCOOLER TYPE:	SCAC	RATING LEVEL:	STANDBY
AFTERCOOLER WATER INLET (°F):	130	FUEL:	NAT GAS
JACKET WATER OUTLET (°F):	210	FUEL SYSTEM:	LPG IMPCO
ASPIRATION:	TA		WITH AIR FUEL RATIO CONTROL
COOLING SYSTEM:	JW+OC, AC	FUEL PRESSURE RANGE(psig):	1.5-5.0
CONTROL SYSTEM:	ADEM4	FUEL METHANE NUMBER:	85
EXHAUST MANIFOLD:	ASWC	FUEL LHV (Btu/scf):	905
COMBUSTION:	LOW EMISSION	ALTITUDE CAPABILITY AT 77°F INLET AIR TEMP. (ft):	3501
NOx EMISSION LEVEL (g/bhp-hr NOx):	2.0	POWER FACTOR:	0.8
ANCILLARY LOAD (ekW):	40	VOLTAGE(V):	240-480

RATING		NOTES	LOAD	100%	75%	50%
GENSET POWER	(WITH ANCILLARY LOAD)	(1)(2)	ekW	1000	750	500
GENSET POWER	(WITH ANCILLARY LOAD)	(1)(2)	kVA	1250	937	625
ENGINE POWER	(WITHOUT FAN)	(2)	bhp	1462	1109	762
GENERATOR EFFICIENCY		(1)	%	95.4	95.5	95.1
GENSET EFFICIENCY(@ 1.0 Power Factor)	(ISO 3046/1)	(3)	%	30.9	29.7	27.3
THERMAL EFFICIENCY		(4)	%	51.8	53.7	57.5
TOTAL EFFICIENCY (@ 1.0 Power Factor)		(5)	%	82.7	83.4	84.8
ENGINE DATA						
GENSET FUEL CONSUMPTION	(ISO 3046/1)	(6)	Btu/ekW-hr	11161	11617	12584
GENSET FUEL CONSUMPTION	(NOMINAL)	(6)	Btu/ekW-hr	11378	11842	12828
ENGINE FUEL CONSUMPTION	(NOMINAL)	(6)	Btu/bhp-hr	7783	8005	8421
AIR FLOW (77°F, 14.7 psia)	(WET)	(7) (8)	ft3/min	3042	2288	1480
AIR FLOW	(WET)	(7) (8)	lb/hr	13488	10146	6560
FUEL FLOW (60ºF, 14.7 psia)			scfm	210	164	118
COMPRESSOR OUT PRESSURE			in Hg(abs)	70.0	60.4	44.1
COMPRESSOR OUT TEMPERATURE			°F	306	270	192
AFTERCOOLER AIR OUT TEMPERATURE			°F	134	131	130
INLET MAN. PRESSURE		(9)	in Hg(abs)	63.5	49.4	33.9
INLET MAN. TEMPERATURE	(MEASURED IN PLENUM)	(10)	°F	138	134	131
TIMING		(11)	°BTDC	18	18	18
EXHAUST TEMPERATURE - ENGINE OUTLET		(12)	°F	886	882	917
EXHAUST GAS FLOW (@engine outlet temp, 14.5 psia)	(WET)	(13) (8)	ft3/min	8303	6242	4175
EXHAUST GAS MASS FLOW	(WET)	(13) (8)	lb/hr	14059	10591	6882
EMISSIONS DATA - ENGINE OUT						
NOx (as NO2)		(14)(15)	g/bhp-hr	2.00	2.00	2.00
CO		(14)(16)	g/bhp-hr	1.92	1.83	1.67
THC (mol. wt. of 15.84)		(14)(16)	g/bhp-hr	2.34	2.36	2.47
NMHC (mol. wt. of 15.84)		(14)(16)	g/bhp-hr	0.35	0.35	0.37
NMNEHC (VOCs) (mol. wt. of 15.84)		(14)(16)(17)	g/bhp-hr	0.23	0.24	0.25
HCHO (Formaldehyde)		(14)(16)	g/bhp-hr	0.31	0.31	0.32
CO2		(14)(16)	g/bhp-hr	500	508	506
EXHAUST OXYGEN		(14)(18)	% DRY	7.4	7.1	6.1
LAMBDA		(14)(18)		1.47	1.41	1.26
ENERGY BALANCE DATA						
LHV INPUT		(19)	Btu/min	189610	148009	106886
HEAT REJECTION TO JACKET WATER (JW)		(20)(27)	Btu/min	49430	42100	34777
HEAT REJECTION TO ATMOSPHERE		(21)	Btu/min	6831	5734	4651
HEAT REJECTION TO LUBE OIL (OC)		(22)(27)	Btu/min	7372	6279	5187
HEAT REJECTION TO EXHAUST (LHV TO 77°F)		(23)(24)	Btu/min	52700	39619	27181
HEAT REJECTION TO EXHAUST (LHV TO 248°F)		(23)	Btu/min	40486	30372	21028
HEAT REJECTION TO AFTERCOOLER (AC)		(25)(28)	Btu/min	10319	6261	1827
PUMP POWER		(26)	Btu/min	971	971	971

CONDITIONS AND DEFINITIONS

Engine rating obtained and presented in accordance with ISO 3046/1. (Standard reference conditions of 77°F, 29.60 in Hg barometric pressure.) No overload permitted at rating shown. Consult the altitude deration factor chart for applications that exceed the rated altitude or temperature.

Emission levels are at engine exhaust flange prior to any after treatment. Values are based on engine operating at steady state conditions, adjusted to the specified NOx level at 100% load. Tolerances specified are dependent upon fuel quality. Fuel methane number cannot vary more than ± 3.

For notes information consult page three.

FUEL USAGE GUIDE

CAT METHANE NUMBER	30	35	40	45	50	55	60	65	70	75	80	85
SET POINT TIMING	-	-	-	-	-	-	-	-	15	16	17	18
DERATION FACTOR	0	0	0	0	0	0	0	0	1	1	1	1

ALTITUDE DERATION FACTORS AT RATED SPEED

INLET AIR TEMP °F	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000
130	1	1	0.96	0.93	0.89	0.86	0.83	0.79	0.76	0.73	0.70	0.68	0.65
120	1	1	0.98	0.94	0.91	0.87	0.84	0.81	0.78	0.75	0.72	0.69	0.66
110	1	1	1	0.96	0.92	0.89	0.85	0.82	0.79	0.76	0.73	0.70	0.67
100	1	1	1	0.98	0.94	0.90	0.87	0.84	0.80	0.77	0.74	0.71	0.68
90	1	1	1	1	0.96	0.92	0.89	0.85	0.82	0.79	0.75	0.72	0.69
80	1	1	1	1	0.98	0.94	0.90	0.87	0.83	0.80	0.77	0.74	0.71
70	1	1	1	1	0.99	0.96	0.92	0.88	0.85	0.82	0.78	0.75	0.72
60	1	1	1	1	1	0.97	0.94	0.90	0.87	0.83	0.80	0.77	0.73
50	1	1	1	1	1	0.99	0.96	0.92	0.88	0.85	0.81	0.78	0.75

ALTITUDE (FEET ABOVE SEA LEVEL)

AFTERCOOLER HEAT REJECTION FACTORS (ACHRF)

INLET AIR TEMP °F	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000
130	1.40	1.47	1.54	1.61	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65
120	1.32	1.39	1.46	1.53	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56
110	1.24	1.30	1.37	1.44	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48
100	1.16	1.22	1.29	1.36	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39
90	1.07	1.14	1.20	1.27	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
80	1	1.06	1.12	1.19	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
70	1	1	1.04	1.10	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
60	1	1	1	1.02	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
50	1	1	1	1	1	1	1	1	1	1	1	1	1

ALTITUDE (FEET ABOVE SEA LEVEL)

FUEL USAGE GUIDE:
This table shows the derate factor and full load set point timing required for a given fuel. Note that deration and set point timing adjustment may be required as the methane number decreases. Methane number is a scale to measure detonation characteristics of various fuels. The methane number of a fuel is determined by using the Caterpillar methane number calculation.

ALTITUDE DERATION FACTORS:
This table shows the deration required for various air inlet temperatures and altitudes. Use this information along with the fuel usage guide chart to help determine actual engine power for your site.

ACTUAL ENGINE RATING:
To determine the actual rating of the engine at site conditions, one must consider separately, limitations due to fuel characteristics and air system limitations. The Fuel Usage Guide deration establishes fuel limitations. The Altitude/Temperature deration factors and RPC (reference the Caterpillar Methane Program) establish air system limitations. RPC comes into play when the Altitude/Temperature deration is less than 1.0 (100%). Under this condition, add the two factors together. When the site conditions do not require an Altitude/Temperature derate (factor is 1.0), it is assumed the turbocharger has sufficient capability to overcome the low fuel relative power, and RPC is ignored. To determine the actual power available, take the lowest rating between 1) and 2).
1) Fuel Usage Guide Deration
2) 1-((1-Altitude/Temperature Deration) + (1-RPC))

AFTERCOOLER HEAT REJECTION FACTORS(ACHRF):
To maintain a constant air inlet manifold temperature, as the inlet air temperature goes up, so must the heat rejection. As altitude increases, the turbocharger must work harder to overcome the lower atmospheric pressure. This increases the amount of heat that must be removed from the inlet air by the aftercooler. Use the aftercooler heat rejection factor (ACHRF) to adjust for inlet air temp and altitude conditions. See note 28 for application of this factor in calculating the heat exchanger sizing criteria. Failure to properly account for these factors could result in detonation and cause the engine to shutdown or fail.

NOTES:
1. Generator efficiencies, power factor, and voltage are based on standard generator. [Genset Power (ekW) is calculated as: (Engine Power (bkW) x Generator Efficiency) - Ancillary Load (ekW)], [Genset Power (kVA) is calculated as: ((Engine Power (bkW) x Generator Efficiency) - Ancillary Load (ekW))/ Power Factor]
2. Rating is with two engine driven water pumps. Tolerance is (+)3, (-)0% of full load.
3. Genset Efficiency published in accordance with ISO 3046/1, based on a 1.0 power factor.
4. Thermal Efficiency is calculated based on energy recovery from the jacket water, lube oil, and exhaust to 248ºF with engine operation at ISO 3046/1 Genset Efficiency, and assumes unburned fuel is converted in an oxidation catalyst.
5. Total efficiency is calculated as: Genset Efficiency + Thermal Efficiency. Tolerance is ±10% of full load data.
6. ISO 3046/1 Genset fuel consumption tolerance is (+)5, (-)0% at the specified power factor. Nominal genset and engine fuel consumption tolerance is ± 3.0% of full load data at the specified power factor.
7. Air flow value is on a 'wet' basis. Flow is a nominal value with a tolerance of ± 5 %.
8. Inlet and Exhaust Restrictions must not exceed A&I limits based on full load flow rates from the standard technical data sheet.
9. Inlet manifold pressure is a nominal value with a tolerance of ± 5 %.
10. Inlet manifold temperature is a nominal value with a tolerance of ± 9°F.
11. Timing indicated is for use with the minimum fuel methane number specified. Consult the appropriate fuel usage guide for timing at other methane numbers.
12. Exhaust temperature is a nominal value with a tolerance of (+)63°F, (-)54°F.
13. Exhaust flow value is on a 'wet' basis. Flow is a nominal value with a tolerance of ± 6 %.
14. Emissions data is at engine exhaust flange prior to any after treatment.
15. NOx tolerances are ± 18% of specified value.
16. CO, CO2, THC, NMHC, NMNEHC, and HCHO values are "Not to Exceed" levels. THC, NMHC, and NMNEHC do not include aldehydes. An oxidation catalyst may be required to meet Federal, State or local CO or HC requirements.
17. VOCs - Volatile organic compounds as defined in US EPA 40 CFR 60, subpart JJJJ
18. Exhaust Oxygen tolerance is ± 0.5; Lambda tolerance is ± 0.05. Lambda and Exhaust Oxygen level are the result of adjusting the engine to operate at the specified NOx level.
19. LHV rate tolerance is ± 3.0%.
20. Heat rejection to jacket water value displayed includes heat to jacket water alone. Value is based on treated water. Tolerance is ± 10% of full load data.
21. Heat rejection to atmosphere based on treated water. Tolerance is ± 50% of full load data.
22. Lube oil heat rate based on treated water. Tolerance is ± 20% of full load data.
23. Exhaust heat rate based on treated water. Tolerance is ± 10% of full load data.
24. Heat rejection to exhaust (LHV to 77°F) value shown includes unburned fuel and is not intended to be used for sizing or recovery calculations.
25. Heat rejection to aftercooler based on treated water. Tolerance is ±5% of full load data.
26. Pump power includes engine driven jacket water and aftercooler water pumps. Engine brake power includes effects of pump power.
27. Total Jacket Water Circuit heat rejection is calculated as: (JW x 1.1) + (OC x 1.2). Heat exchanger sizing criterion is maximum circuit heat rejection at site conditions, with applied tolerances. A cooling system safety factor may be multiplied by the total circuit heat rejection to provide additional margin.
28. Total Aftercooler Circuit heat rejection is calculated as: AC x ACHRF x 1.05. Heat exchanger sizing criterion is maximum circuit heat rejection at site conditions, with applied tolerances. A cooling system safety factor may be multiplied by the total circuit heat rejection to provide additional margin.

ENGINE POWER (bhp):	1462	COOLING SYSTEM:	JW+OC, AC
ENGINE SPEED (rpm):	1800	AFTERCOOLER WATER INLET (°F):	130
EXHAUST MANIFOLD:	ASWC	JACKET WATER OUTLET (°F):	210

Free Field Mechanical and Exhaust Noise

SOUND PRESSURE LEVEL (dB)											
			Octave Band Center Frequency (OBCF)								
100% Load Data			dB(A)	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Mechanical Sound	Distance from the Engine (ft)	3.3	100	95	96.6	92.8	94	96.1	93.3	90.1	84.4
		23.0	90.4	85.4	87	83.2	84.4	86.5	83.7	80.5	74.8
		49.2	85.1	80.1	81.7	77.9	79.1	81.2	78.4	75.2	69.5
Exhaust Sound	Distance from the Engine (ft)	4.9	115.4	104.7	105.7	112.4	110.6	108.3	108.2	108	106.1
		23.0	102	92.4	95.4	100.2	96.7	95.4	94.7	94.6	91.8
		49.2	95.4	85.8	88.8	93.6	90	88.8	88.1	87.9	85.2

SOUND PARAMETER DEFINITION:

Data Variability Statement:
Sound data presented by Caterpillar has been measured in accordance with ISO 6798 in a Grade 3 test environment. Measurements made inaccordance with ISO 6798 will result in some amount of uncertainty. The uncertainties depend not only on the accuracies with which sound pressurelevels and measurement surface areas are determined, but also on the 'near-field error' which increases for smaller measurement distances and lowerfrequencies. The uncertainty for a Grade 3 test environment, that has a source that produces sounds that are uniformly distributed in frequency over thefrequency range of interest, is equal to 4 dB (A-weighted). This uncertainty is expressed as the largest value of the standard deviation.

Gas Engine Rating Pro
Fuel Analysis
Printed 13Oct2015

Constituent	Abbrev	Mole %	Norm
WATER VAPOR	H20	0.0000	0.0000
METHANE	CH4	89.0400	89.0400
ETHANE	C2H6	9.8610	9.8610
PROPANE	C3H8	0.3270	0.3270
ISOBUTANE	iso-C4H10	0.0270	0.0270
NORBUTANE	nor-C4H10	0.0360	0.0360
ISOPENTANE	iso-C5H12	0.0080	0.0080
NORPENTANE	nor-C5H12	0.0050	0.0050
HEXANE	C6H14	0.0060	0.0060
HEPTANE	C7H16	0.0000	0.0000
NITROGEN	N2	0.5180	0.5180
CARBON DIOXIDE	CO2	0.1720	0.1720
HYDROGEN SULFIDE	H2S	0.0000	0.0000
CARBON MONOXIDE	CO	0.0000	0.0000
HYDROGEN	H2	0.0000	0.0000
OXYGEN	O2	0.0000	0.0000
HELIUM	HE	0.0000	0.0000
NEOPENTANE	neo-C5H12	0.0000	0.0000
OCTANE	C8H18	0.0000	0.0000
NONANE	C9H20	0.0000	0.0000
ETHYLENE	C2H4	0.0000	0.0000
PROPYLENE	C3H6	0.0000	0.0000
TOTAL (Volume %)		100.0000	100.0000

Fuel Makeup:	Dominion - LL Tonkin
Unit of Measure:	English

Calculated Fuel Properties

Caterpillar Methane Number:	76.3
Lower Heating Value (Btu/scf):	982
Higher Heating Value (Btu/scf):	1088
WOBBE Index (Btu/scf):	1258
THC: Free Inert Ratio:	143.93
Total % Inerts (% N2, CO2, He):	0.69%
RPC (%) (To 905 Btu/scf Fuel):	100%
Compressibility Factor:	0.998
Stoich A/F Ratio (Vol/Vol):	10.23
Stoich A/F Ratio (Mass/Mass):	16.78
Specific Gravity (Relative to Air):	0.610
Specific Heat Constant (K):	1.301

CONDITIONS AND DEFINITIONS

Caterpillar Methane Number represents the knock resistance of a gaseous fuel. It should be used with the Caterpillar Fuel Usage Guide for the engine and rating to determine the rating for the fuel specified. A Fuel Usage Guide for each rating is included on page 2 of its standard technical data sheet.

RPC always applies to naturally aspirated (NA) engines, and turbocharged (TA or LE) engines only when they are derated for altitude and ambient site conditions.

Project specific technical data sheets generated by the Caterpillar Gas Engine Rating Pro program take the Caterpillar Methane Number and RPC into account when generating a site rating.

Fuel properties for Btu/scf calculations are at 60F and 14.696 psia.

Caterpillar shall have no liability in law or equity, for damages, consequently or otherwise, arising from use of program and related material or any part thereof.

FUEL LIQUIDS

Field gases, well head gases, and associated gases typically contain liquid water and heavy hydrocarbons entrained in the gas. To prevent detonation and severe damage to the engine, hydrocarbon liquids must not be allowed to enter the engine fuel system. To remove liquids, a liquid separator and coalescing filter are recommended, with an automatic drain and collection tank to prevent contamination of the ground in accordance with local codes and standards.

To avoid water condensation in the engine or fuel lines, limit the relative humidity of water in the fuel to 80% at the minimum fuel operating temperature.

P.C.McKENZIE Company

1365 Mc Laughlin Run Road P.O. Box 112638
Pittsburgh, PA 15241
Phone 412-257-8866 Fax 412-257-8890

L-L Station Boiler

Submittal

Hurst Boiler- Mode LPW-G-70-60W

PO # 4500258552

HURST HOT WATER BOILER SALES ORDER ENTRY FORM (R10)

DATE: **07 DECEMBER '15** SHIP DATE: **HOLD** HBC J.O. NO.: **1500568**

SOLD TO: **P.C. MCKENZIE COMPANY**
P.O. BOX 112638
PITTSBURGH, PA 15241

END USER (X): **DOMINION TRANSMISSION**
L-L TONKIN STATION
WEST UNION, WV

CONTACT: **PERRY LEAPLINE**

PH: **(412)-257-8866** FAX: **(412)-257-8890** P.O. NO. **HUR-20076**

SALES TAX NO. **ON FILE** STATE **(PA)** D&B:

APPROVALS: SALES CREDIT: TYPED BY: **JEP**

PRICING: **HOLD FOR SUBMITTAL APPROVAL**

TERMS OF PAYMENT: ( ) NET 30 ( )

SHIP TO: **HOLD FOR SUBMITTAL APPROVAL**

( ) PREPAY & ADD
( ) 3RD PARTY
( ) COLLECT
( ) ALLOWED
( )

SHIPPING INSTRUCTIONS: **HOLD**

EQUIPMENT DESCRIPTION: **(1) 70 HP GAS FIRED LPW 60 PSI DESIGN HOT WATER BOILER**
****DUPLICATE OF JOB# 1500207/208 W/ EXCEPTION TO VOLTAGE****

BOILER SERIES: **LPW** (**3**) PASS ( ) DRY BACK ( ) WET BACK (**X**) SEMI-WETBACK
(**X**) SCOTCH ( ) FIREBOX ( ) LPE ( ) VERTICAL TUBELESS ( ) VERTICAL FIRETUBE ( )
MODEL NO: **LPW – G – 70 – 60W** BHP: **70** MBH: **2,343**
PRESSURES: **60** PSI DESIGN, **45** PSI OPERATING. ASME SECTION ( ) I (**X**) IV
(**X**) HOT WATER SUPPLY: **180** D/F RETURN: **160** D/F
FIRESIDE HEATING SURFACE: **284** SQ.FT. FURNACE VOLUME: **19.4** CU. FT.
( ) UL LABEL B (**X**) ASME CSD-1 ( ) CRN (**X**) SUBMITTAL DRAWING **REQUIRED**
(**X**) STANDARD PAINT, INSULATION & JACKET ( ) SPECIAL FINISHING:

PRIMARY BOILER OPENINGS: S = SCREWED F = FLANGED * = SPECIAL
(**F**) HOT WATER OUTLET: **6** ″ (**S**) HOT WATER RETURN: **4** ″
(**S**) DRAIN CONNECTION: **1.5** ″ ( )
STACK OUTLET: **12** ″ (**X**) VERTICAL ( ) HORIZONTAL ( ) "SERIES "B" THERM. 750 D/F
( ) MANUAL DAMPER (**X**) **FIELD BAROMETRIC DAMPER, SHIPPED LOOSE**
( ) 12" x 16" MANHOLE (**1**) 3" x 4" HAND HOLES (**5**) 2" CPLGS. ( ) 1.5" CPLGS.
FRONT DOORS: ( ) HINGED ( ) DAVITED REAR DOORS: ( ) HINGED ( ) DAVITED
( ) EXPLOSION RELIEF DOORS REQD. ( ) OTHER SPECIAL ITEMS:

PRIMARY LWCO: (**X**) M&M 750-MT-120 ( ) ( ) AUTO RESET (**X**) MR
( ) FEEDER ( ) LWCO DRAIN VALVE, APOLLO
( ) AUDIBLE ALARM ( ) LIGHT MOUNT ON: ( ) LEFT (**X**) RIGHT ( ) M&M TC-4 TEST N CHECK

AUX. LWCO: (**X**) M & M # 750-MT-120 ( ) ( ) AUTO RESET (**X**) MR
( ) FEEDER ( ) LWCO DRAIN VALVE, APOLLO
( ) AUDIBLE ALARM ( ) LIGHT MOUNT ON: ( ) LEFT (**X**) RIGHT ( ) M&M TC-4 TEST N CHECK

SAFETY RELIEF VALVE (S): **KUNKLE 537** SET AT **60** PSI
(**1**) **1.5" X 2"** (**X***) **DIFFERENT FROM DUPL. JOB**** ( )
BOILER PRESSURE GAUGE: ( ) PRECISION ( ) ( ) ″ - PSI
BOILER TEMP GAUGE: ( ) PRECISION ( ) ( ) ″ DIAL °- °D/F
BOILER COMBINATION PRESSURE/TEMP GAUGE: (**X**) **4** ″ DIAL **70** °- **320** °D/F, **0** - **200** PSI
( ) AUTOMATIC AIR VENT VALVE (**X**) **ABOVE PRECISION**
(**1**) FLOW SWITCH (**X**) **FS 251, NEMA 1, SHIPPED LOOSE FOR FIELD MOUNTING**

HOT WATER SUPPLY GAUGE (OUTLET) CONNECTIONS: ( ) HBC SUPPLIED (**X**) FIELD SUPPLIED

SUPPLY THERMOMETER: ( ) ″ DIAL °- °D/F

SUPPLY PRESSURE GAUGE: ( ) ″ - PSI

COMBINATION PRESSURE/TEMP GAUGE: ( ) ″ DIAL °- °D/F, - PSI

HOT WATER RETURN GAUGE (INLET) CONNECTIONS: ( ) HBC SUPPLIED (**X**) FIELD SUPPLIED

RETURN THERMOMETER: ( ) ″ DIAL °- °D/F

RETURN PRESSURE GAUGE: ( ) ″ - PSI

COMBINATION PRESSURE/TEMP GAUGE: ( ) ″ DIAL °- °D/F, - PSI

BOILER DRAIN VALVE: ” PSI, ( ) LFT ( ) RT ( ) SCREWED ( ) FLANGED

( ) SLOW OPENING: ( ) APOLLO BALL ( ) UB 226UT ( ) UB 325U ( )

( )

PRESSURE/TEMPERATURE CONTROLS: (**X**) HONEYWELL ( )

(**1**) OPERATING **L6006A 1145** (**1**) PROPORTIONING **T991A 1061**

(**1**) HI LIMIT **L4006E 1000** (**X**) MR ( ) LIGHT ( ) ALARM

(**1**) AUTO LO FIRE HOLD **L6006A 1145** ( ) HIGH PRESSURE WELL (SEC. 1)

( ) LO PRESS. CONTROL, MERCOID DR31-153U, MR, ( ) MR ( ) ALARM ( ) LIGHT

( )

OTHER BOILER TRIM:

( ) _____

( ) _____

( ) _____

( ) _____

( ) _____

( ) _____

( ) _____

( ) _____

BURNER DATA: ( ) IC (**X**) PF ( ) WEB (**X**) **QUOTE #100815-093MJKR1**

FURNISHED BY: (**X**) HBC ( ) (**X**) WE MOUNT ( ) FIELD MOUNT

BURNER MODEL: **CR3-G-20HTD** ( )

AGENCY APPROVALS: (**X**) UL (**X**) CSD-1 (**X**) FM ( ) GE GAP ( ) NFPA 85 ( )

FUELS: (**X**) NAT.GAS AT **28" W.C.** ( ) LP AT ( ) #2 OIL

( ) # OIL ( )

IGNITION TYPE: (**X**) GAS PILOT ( ) DIRECT SPARK ( )

ELECTRICAL: MOTORS **480** / **60** / **3** (**X**) CONTROL TRANSFORMER ( )

1.5 HP BLOWER ( ) OIL PUMP MOUNTED:

1.25 ″ GAS TRAIN ON ( ) LFT (**X**) RT ( ) AIR COMPRESSOR ( ) LFT ( ) RT ( )

CONTROL PANEL: (**X**) ON BURNER ( ) SIDE OF BOILER ( )

PANEL LIGHTS: (**X**) POWER (**X**) FUEL ON (**X**) CFH (**X**) IGNITION (**X***) ALARM (**X***) FF

( ) DRAFT (**X***) **LO FLOW** (**X***) **LO GAS** (**X***) **LO H20** (**X***) **AIR FLOW FAIL** (**X***) **HIGH LIMIT**

ALARM ( ) BELL (**X**) HORN (**X**) AUTO SILENCER (**X***) TO ALARM ON *** ABOVE

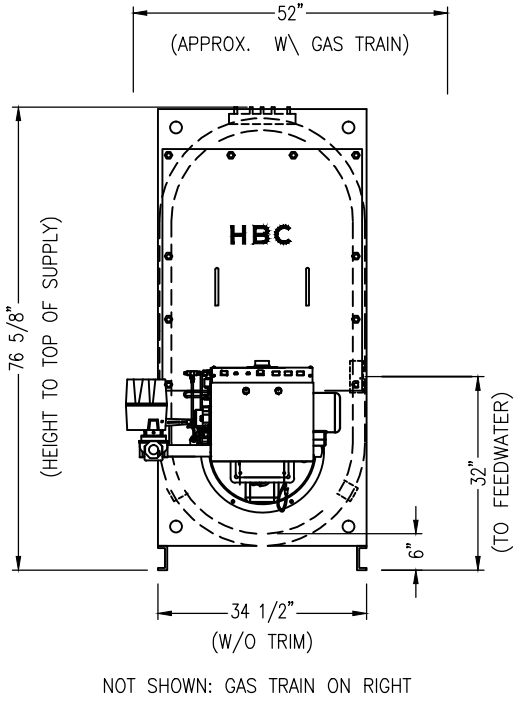
OPERATING SEQUENCE: ( ) ON/OFF ( ) LHO ( ) LHO, PLFS ( ) LHL ( ) LHL, PLFS

(**X**) FULL MOD. W/ POT. ( )

(X) RM7840L/UV W/ DISPLAY

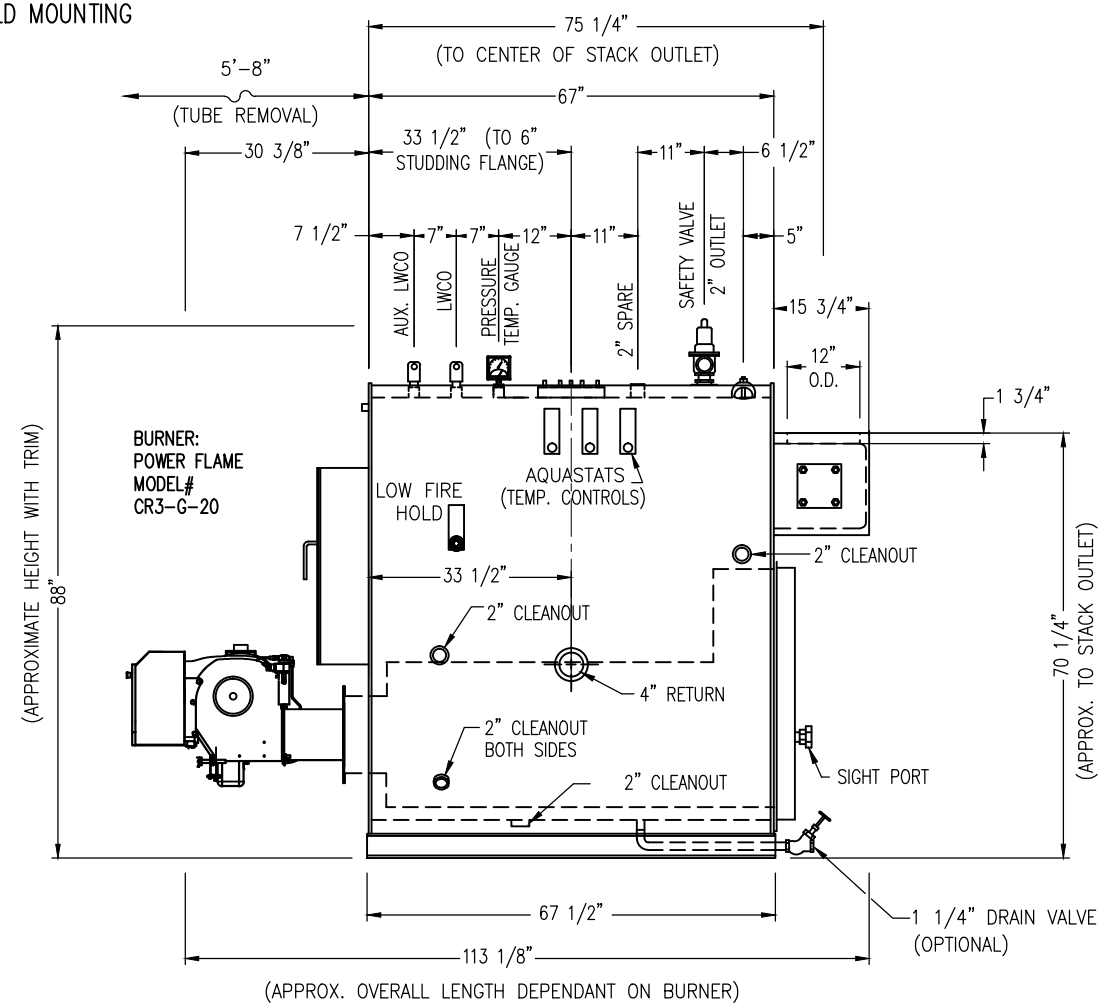
(X) ADDITIONAL RELAYS; SEE SUBMITTALS

NOTES:
* FIELD BAROMETRIC DAMPER, SHIPPED LOOSE
* (1) FLOW SWITCH, NEMA FS251 SHIPPED LOOSE FOR FIELD MOUNTING
* RM7840L/UV W/DISPLAY



NOT SHOWN: GAS TRAIN ON RIGHT

FRONT VIEW



(APPROX. OVERALL LENGTH DEPENDANT ON BURNER)

RIGHT SIDE VIEW

BOILER SPECIFICATION CHART			
BUILT TO ASME CODE SECTION	IV	FOR:	60 PSI WTR.
HEATING SURFACE			284 SQ. FT.
FURNACE OUTSIDE DIA.			24 INCHES
FURNACE VOLUME			19.4 CU. FT.
WATER CAPACITY	(FLOODED)		298 GALS.
SHIPPING WEIGHT			5785 LBS.

1	JEH	12/04/15	CHK'D.	ADD AUX LWCO/MOVE CONTROL PANEL
R	BY:	DATE:	CHK'D.	REASON FOR CHANGE

HURST BOILER & WELDING CO., INC.

SERIES LPW, SECT. 4 HOT WATER, 70 HP, 60 PSI 3 PASS DRYBACK SCOTCH BOILER

P.C. McKENZIE COMPANY
DOMINIOM TRANSMISSION

SCALE:	DRAWN BY:	DATE:	CHECKED BY:	DRAWING NO:	R
N.T.S.	J.E.H.	04/29/15	J.A.B.	1500568	1

Hurst BOILER & WELDING COMPANY, INC

THREE PASS FIRETUBE HOT WATER BOILER

HURST "PERFORMANCE" BOILERS

LPW SERIES

THROUGH THE DOOR DESIGN!

Hot Water Applications

UL Approved Forced Draft Burners

- Specifiable using the attributes of the LPW design.
- Remains classified as a modified scotch, fire tube type boiler.
- Efficiencies tested in our lab at >83% on natural gas.
- Smaller foot print. As compared to the LPE, can be installed in tighter places.
- Semi wet-back construction

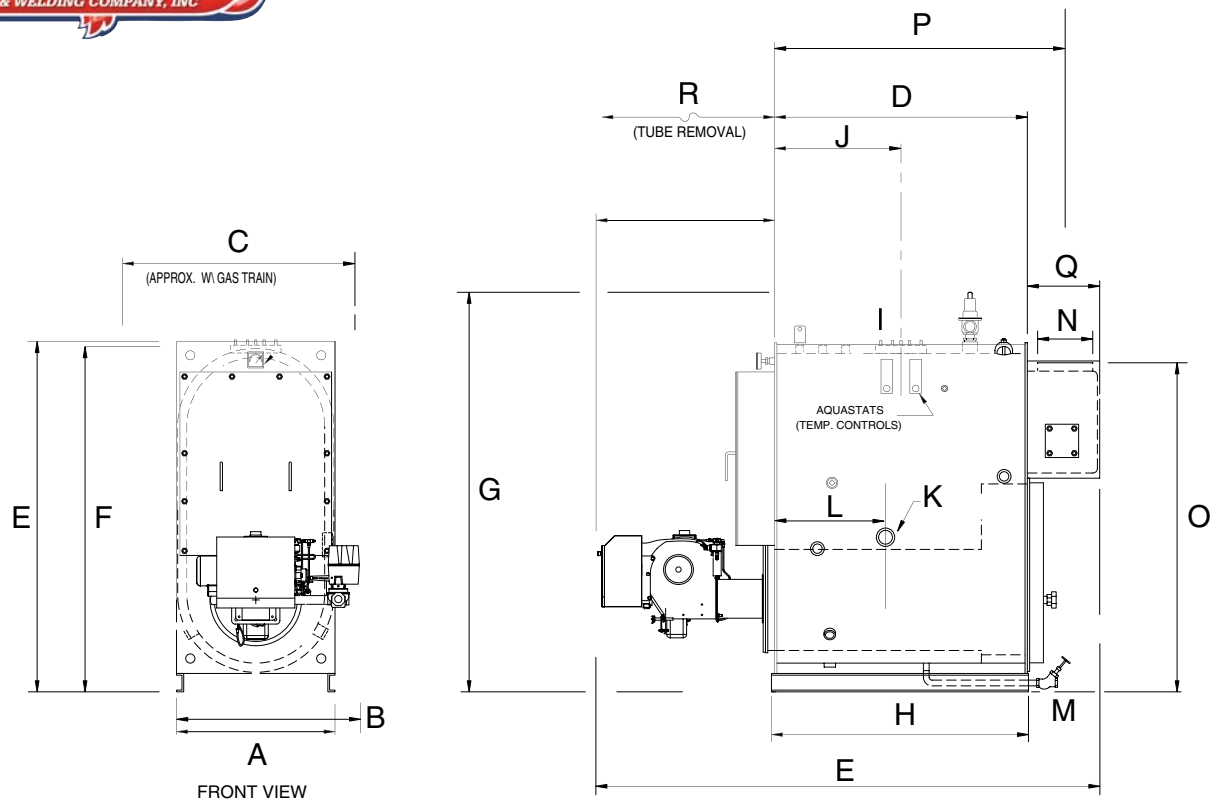
Capacities From
30 to 125 HP

30 PSI Water
[60 PSI Water Optional]

HEAVIEST DESIGNED BOILER IN ITS CLASS

Designed, constructed and stamped in accordance with the requirements of the ASME Boiler Codes.

Inspected and registered with the National Board of Boiler & Pressure Vessel Inspectors.

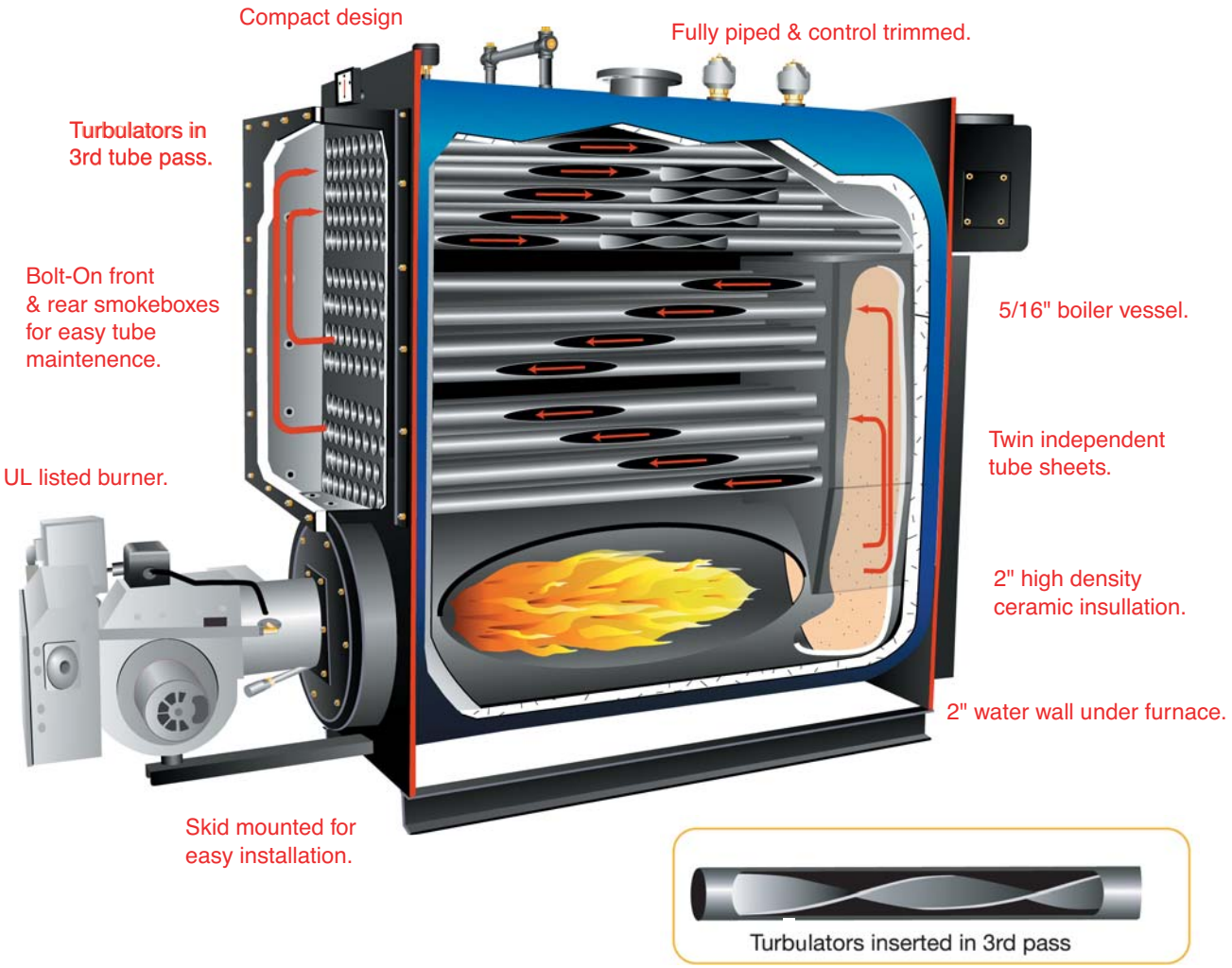


BOILER SPECIFICATIONS
(ALL DIMENSIONS ARE IN INCHES)

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE. CERTIFIED DRAWINGS AVAILABLE UPON

	BOILER HORSEPOWER			30	40	50	60	70	80	100	125	
	HEATING SURFACE	FIRESIDE	SQ.FT.	120	160	200	240	280	320	400	500	
	MBH OUTPUT, HOT WATER			1004	1339	1674	2009	2343	2678	3348	4184	
	FIRING RATE, GAS	1,000 BTU	CFH	1260	1680	2100	2520	2940	3360	4200	5250	
	FIRING RATE, #2 OIL	140,000 BTU	GPH	9	12	15	18	21	24	30	37 1/2	
A	WIDTH WITHOUT TRIM		IN	31	31	31	34 1/2	34 1/2	3472	34 1/2	34 1/2	A
B	WIDTH WITH TRIM		IN	38	38	38	42	42	42	42	42	B
C	WIDTH WITH GAS TRAIN		IN	49	49	49	52	52	52	52	52	C
D	BOILER LENGTH		IN	37	49	61	55	67	79	91	106	D
E	OVERALL LENGTH	STD. BURNER	IN	86	98	114	111	123	140	152	169	E
F	SUPPLY HEIGHT		IN	71 1/2	71 1/2	71 1/2	76 5/8	76 5/8	76 5/8	76 5/8	76 5/8	F
G	HEIGHT WITH TRIM		IN	79	79	79	86	86	86	86	86	G
H	LENGTH OF SKID		IN	54	66	78	72	84	96	108	123	H
I	SUPPLY SIZE		IN	4	4	4	6	6	6	6	6	I
J	SUPPLY LOCATION		IN	18 1/2	24 1/2	30 1/2	27 1/2	33 1/2	39 1/2	45 1/2	50 1/2	J
K	RETURN SIZE		IN	4	4	4	4	4	4	4	4	K
L	RETURN LOCATION		IN	27 1/4	27 1/4	27 1/4	32	32	32	32	36	L
M	BOILER DRAIN SIZE		IN	1	1 1/4	1 1/4	1 1/4	1 1/2	1 1/2	1 1/2	1 1/2	M
N	STACK DIAMETER, O.D.		IN	10	10	10	12	12	12	12	14	N
O	STACK HEIGHT		IN	60 1/4	60 1/4	60 1/4	67 1/4	67 1/4	67 1/4	67 1/4	67 1/4	O
P	TO CENTER OF STACK		IN	6 7/8	6 7/8	6 7/8	8 1/4	8 1/4	8 1/4	8 1/4	9 1/4	P
Q	REAR SMOKEBOX DEPTH		IN	13 3/4	13 3/4	13 3/4	15 3/4	15 3/4	15 3/4	15 3/4	17 3/4	Q
R	TUBE PULL SPACE		IN	38	50	62	56	68	80	92	107	R
	SHIPPING WEIGHT		LBS	3150	3900	4500	4350	5100	5900	6600	7500	
	WATER CONTENT - WATER	FLOODED	GALS	135	185	240	250	310	390	430	500	
	BOILER HORSEPOWER			30	40	50	60	70	80	100	125	

CONNECTIONS FOUR INCHES AND SMALLER ARE FEMALE THREAD, 6" CONNECTIONS ARE 150 LB. FLANGES. * STUDDING FLANGE.



STANDARD EQUIPMENT

BOILER: Three pass design for 30 psi hot water (available for 60 psi water). Factory assembled with trim and, tested in accorance with ASME code, UL, and CSD-1 codes. Steel turbolators inserted in third pass for maximum heat-transfer control.

STANDARD BOILER TRIM: Kunkle safety relief valve, operating temperature control, high limit temperature control with manual reset, 3 1/2" combination pressure & temperature gauge, M&M 750 low water cut-off control with manual reset.

BURNER: UL listed with pre-piped, wired and factory tested forced draft power burners for:

- Natural Gas
- Propane (LP) Gas
- No. 2 (Diesel) Oil
- Combination Gas/Oil.

LPW SERIES

THREE PASS FIRETUBE
COMPACT BOILERS

HURST "PERFORMANCE" BOILER

- Factory Assembled, Prewired and Tested
- No Field Assembly Required
- UL Listed Boiler/Burner Packages
- Fully Assembled, Pre-piped, Prewired, Pressure Tested Gas Trains
- Complies with ASME, UL, CSD-1 and ASHRAE Standards
- High Efficiency, Low Stack Temperatures
- Customer Service Support Through National Network of Sales, Service, St Training and Parts by Factory Representatives

LPW BOILER FEATURES

Modified Scotch designed to fit through a standard 36" x 80" door opening
Up to 125 HP (4,184 mbh output).

The Hurst LPW "Performance" boiler is America's most heavily designed and built boiler in its class. Consider the features and specify the Hurst LPW Series.

1. A welded steel firetube boiler, the LPW has extra-heavy 13-gauge tubes for extended life. All tubes are attached to the tube sheets by rolling and flaring. There are no welded tubes in the LPW.

2. Thickest materials used in the industry . . .

   A. Boiler shell is 5/16" thick boiler plate 30-40 HP / 3/8" 50-125 HP.
   B. Twin boiler tube sheets are 1/2" thick boiler plate.
   C. Insulation is 2" ceramic wool and is lagged with 22-gauge boiler jacket.
   D. Extra heavy 4" channel iron boiler skids.

3. Designed to last with special industrial grade features . . .

   A. Couplings are 3,000 psi.
   B. Flanged, detachable front and rear smoke boxes.
   C. Brass nuts on front access panels, brass plugs in factory pre-piped crosses and tees on trim.

P. O. Drawer 530
21971 Highway 319 N.
Coolidge, Georgia 31738
(229) 346-3545 (Tel.)
(229) 346-3874 (Fax.)
e-mail: info@hurstboiler.com

Attachment O

Monitoring / Recordkeeping / Reporting / Testing Plans

Monitoring/Recordkeeping/Reporting/Testing Plans

The emergency generator (AUX02) and boiler (BLR02) being updated through this application will comply with the monitoring, recordkeeping, reporting, and testing requirement provided in the Station's current permit for these sources (R13-1077A and R30-01700003-2015).

Attachment P

Public Notice

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that Dominion Transmission, Inc. has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Class II Administrative Update for its L.L. Tonkin Compressor Station located on Tonkin Station Road, West Union, in Doddridge County, West Virginia. The latitude and longitude coordinates are: 39° 18' 35.31" N and 80° 46' 54.13" W.

The applicant estimates the changes, if modification application is approved, in potential to discharge the following Regulated Air Pollutants will be: Carbon Monoxide increases by 1.66 tons per year, Nitrogen Oxides increases by 2.03 tons per year, PM10 and PM2.5 increase by 0.08 tons per year, Sulfur Dioxide increases by 0.007 tons per year, Volatile Organic Compounds (VOC) increase by 0.39 tons per year, Carbon Dioxide Equivalents (CO_2e) increase by 835 tons per year, and Formaldehyde increases by 0.23 tons per year.

Startup of operation is planned to begin on or about the 1st day of June, 2017. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1250, during normal business hours.

Dated this the [DATE] of December, 2016.

By: Dominion Transmission, Inc.
Cristie D. Neller
Vice President, System Engineering
707 E. Main Street
Richmond, VA 23219

Attachment S

Title V Permit Revision Information

Attachment S

Title V Permit Revision Information

1. New Applicable Requirements Summary

Mark all applicable requirements associated with the changes involved with this permit revision:

☐ SIP	☐ FIP
☒ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☐ NESHAP (45CSR15)	☐ Nonattainment NSR (45CSR19)
☒ Section 111 NSPS (Subpart(s)_JJJJ (no change to requirements_)	☒ Section 112(d) MACT standards (Subpart(s)_ZZZZ (no change to requirements)_)
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☐ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ Compliance Assurance Monitoring (40CFR64) [(1)]
☐ NO_x Budget Trading Program Non-EGUs (45CSR1)	☐ NO_x Budget Trading Program EGUs (45CSR26)

[(1)] If this box is checked, please include **Compliance Assurance Monitoring (CAM) Form(s)** for each Pollutants Specific Emission Unit (PSEU) (See Attachment H to Title V Application). If this box is not checked, please explain why **Compliance Assurance Monitoring** is not applicable:

This regulation does not apply because none of the proposed equipment use add-on emission controls.

2. Non Applicability Determinations

List all requirements, which the source has determined not applicable to this permit revision and for which a permit shield is requested. The listing shall also include the rule citation and a rationale for the determination.

N/A

☒ **Permit Shield Requested** *(not applicable to Minor Modifications)*

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

3. Suggested Title V Draft Permit Language

Are there any changes involved with this Title V Permit revision outside of the scope of the NSR Permit revision? ☐ Yes ☒ No If Yes, describe the changes below.

Also, please provide **Suggested Title V Draft Permit language** for the proposed Title V Permit revision (including all applicable requirements associated with the permit revision and any associated monitoring /recordkeeping/ reporting requirements), OR attach a marked up pages of current Title V Permit. Please include appropriate citations (Permit or Consent Order number, condition number and/or rule citation (e.g. 45CSR§7-4.1)) for those requirements being added / revised.

4. Active NSR Permits/Permit Determinations/Consent Orders Associated With This Permit Revision

Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
R13-1077A	03/26/2015	n/a
	/ /	
	/ /	

5. Inactive NSR Permits/Obsolete Permit or Consent Orders Conditions Associated With This Revision

Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
	/ /	
	/ /	
	/ /	

6. Change in Potential Emissions

Pollutant	Change in Potential Emissions (+ or -), TPY
NO_x	+2.03
CO	+1.66
VOC	+0.39
PM_{10}	+0.08
SO_2	+0.007
Formaldehyde	+0.23

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

7. Certification For Use Of Minor Modification Procedures ***(Required Only for Minor Modification Requests)***

Note:	*This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete. The criteria for allowing the use of Minor Modification Procedures are as follows:*

i. Proposed changes do not violate any applicable requirement;

ii. Proposed changes do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;

iii. Proposed changes do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient air quality impacts, or a visibility increment analysis;

iv. Proposed changes do not seek to establish or change a permit term or condition for which there is no underlying applicable requirement and which permit or condition has been used to avoid an applicable requirement to which the source would otherwise be subject (synthetic minor). Such terms and conditions include, but are not limited to a federally enforceable emissions cap used to avoid classification as a modification under any provision of Title I or any alternative emissions limit approved pursuant to regulations promulgated under § 112(j)(5) of the Clean Air Act;

v. Proposed changes do not involve preconstruction review under Title I of the Clean Air Act or 45CSR14 and 45CSR19;

vi. Proposed changes are not required under any rule of the Director to be processed as a significant modification;

Notwithstanding subparagraph 45CSR§30-6.5.a.1.A. (items i through vi above), minor permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in rules of the Director which are approved by the U.S. EPA as a part of the State Implementation Plan under the Clean Air Act, or which may be otherwise provided for in the Title V operating permit issued under 45CSR30.

Pursuant to 45CSR§30-6.5.a.2.C., the proposed modification contained herein meets the criteria for use of Minor permit modification procedures as set forth in Section 45CSR§30-6.5.a.1.A. The use of Minor permit modification procedures are hereby requested for processing of this application.

(Signed):	*(Please use blue ink)*	Date:	12 / 20 / 16 *(Please use blue ink)*
Named (typed):	**Cristie D. Neller**	Title:	**Vice President, System Engineering**

Note: Please check if the following included (if applicable):

☐	Compliance Assurance Monitoring Form(s)
☐	Suggested Title V Draft Permit Language

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.