Trans Energy, Inc.
Oil and Gas Exploration and Development

March 7, 2016

Bev McKeone
WV – DEP Air Quality
601 57th Street
Charleston, WV 25304

RE: Dewhurst Air Quality Permit
Wetzel County

Dear Ms. McKeone:

Attached is our Air Quality permit. I had submitted this to you back in May 2014, and as we discussed, it appears you did not receive it.

I am re-submitting the application and have enclosed a check in the amount of $1,000.00, Ck. 13265. If you have any questions or need any additional information, let me know.

Sincerely,

Leslie A. Gearhart
Vice President Operations

Enc.

210 2nd Street, P.O. Box 393 St. Marys, WV 26170 304.684.7053 Fax 304.684.3658
www.transenergyinc.com

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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)*:
Trans Energy, Inc.

2. Federal Employer ID No. ***(FEIN)***:
93-0997412

3. Name of facility *(if different from above)*:
Dewhurst Well 110H & 111H

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

5A. Applicant's mailing address:
PO Box 393
St. Marys, WV 26170

5B. Facility's present physical address:
See Attached Map, Wetzel County, Jacksonburg, WV

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:

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: Site is leased from landowner
- 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.): Well Site Water Separation System

10. North American Industry Classification System **(NAICS)** code for the facility:
211111

11A. DAQ Plant ID No. (for existing facilities only):
103 – 00076

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):
NA

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.**

I-70 W to Route 2 South into New Martinsville, WV, take 20 west into Jacksonburg, WV, take a right onto Buffalo Run Road (CH82) follow for 3.3 miles to a "Y" for Campbell Run Road and Buffalo Run Road, stay left on Buffalo Run Road, 3/10 mile to well site.

12.B. New site address (if applicable):	12C. Nearest city or town:	12D. County:
NA	Jacksonburg	Wetzel
12.E. UTM Northing (KM): 4370.88	**12F. UTM Easting (KM):** 531.70	**12G. UTM Zone:** 17S

13. Briefly describe the proposed change(s) at the facility:
This is an "After-the-Fact" application for 45CSR13 for a Well Site Water Separation System on a Marcellus Well Pad.

14A. Provide the date of anticipated installation or change: 10/30/2013

- If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: 1/28/2014

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). Operational

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		

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 Leslie A. Gearhart VP Operations (Please use blue ink) DATE: 3-7-16 (Please use blue ink)

35B. Printed name of signee: Leslie A. Gearhart		35C. Title: Vice President of Operations
35D. E-mail: lesliegearhart@transenergyinc.com	36E. Phone: 304-684-7053	36F. FAX: 304-684-3658
36A. Printed name of contact person (if different from above): NA		36B. Title: NA
36C. E-mail: NA	36D. Phone: NA	36E. FAX: NA

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.

WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION CERTIFICATE

ISSUED TO:
TRANS ENERGY INC
DBA TRANS ENERGY INC OF NEVADA
210 2ND ST
SAINT MARYS, WV 26170-1097

BUSINESS REGISTRATION ACCOUNT NUMBER: **1052-6857**

This certificate is issued on: **06/24/2011**

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.

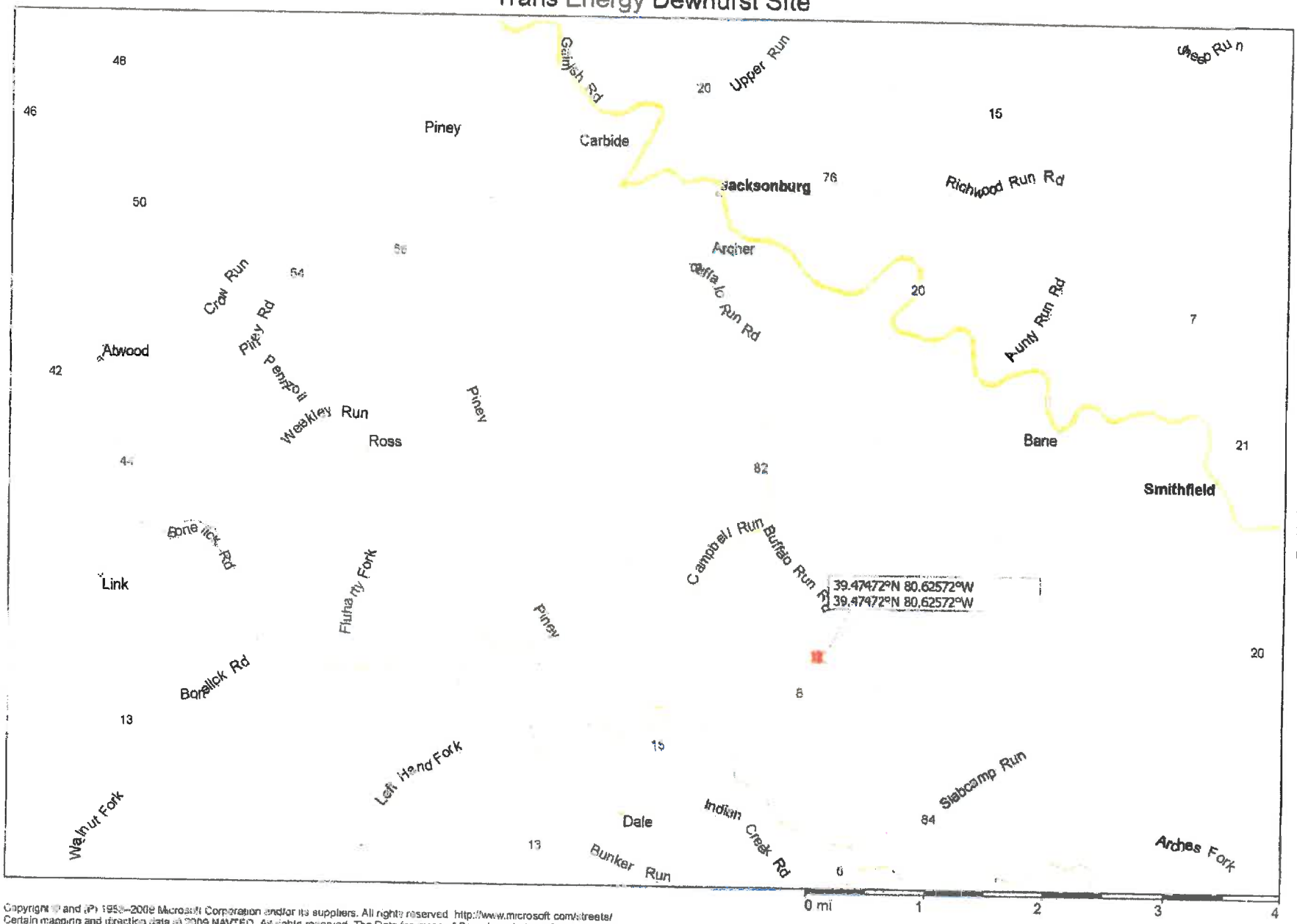
This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

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.

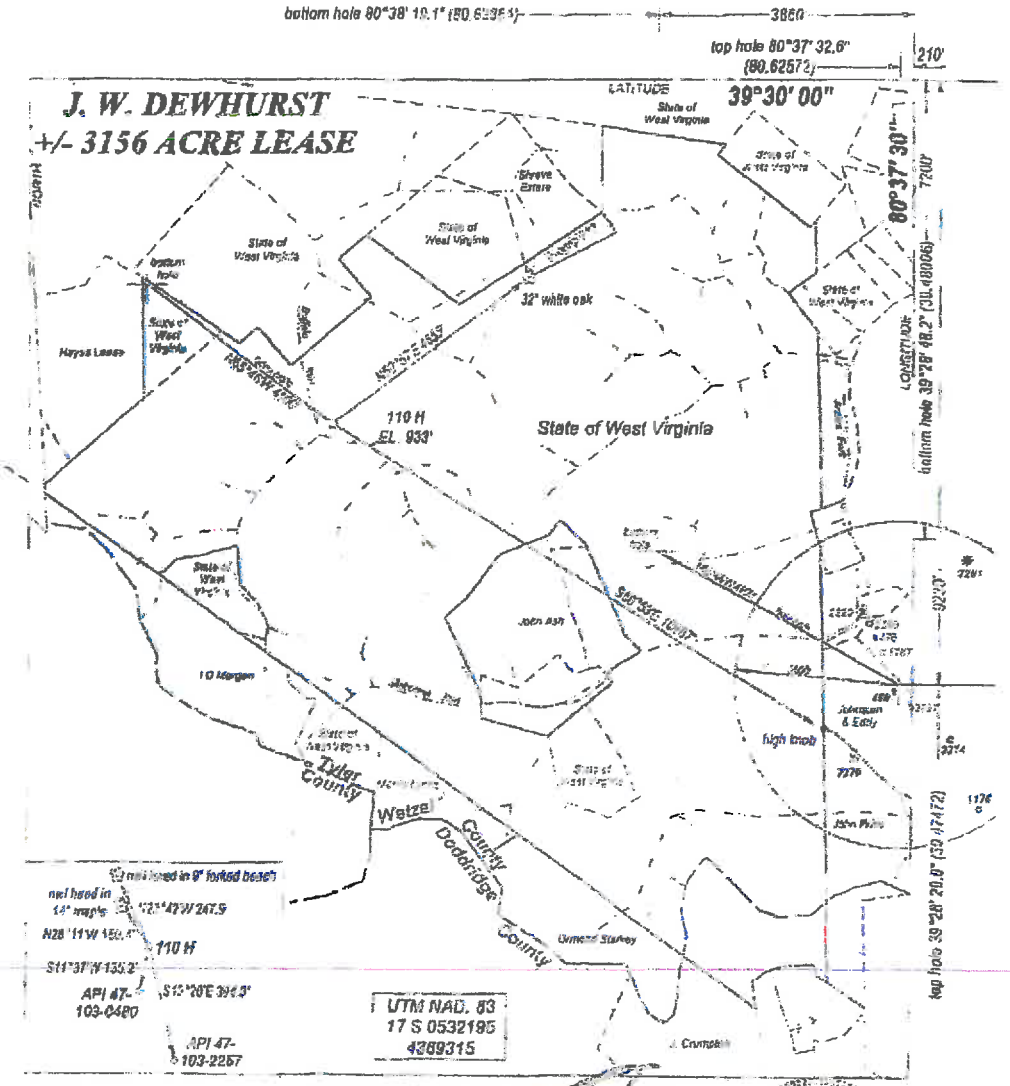
atL006 v.4
L0272055424

Trans Energy Dewhurst Site



ATTACHMENT B

ATTACHMENT B



STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS

DATE JUNE 8TH, 2011
OPERATORS WELL NO. DEWHURST 110H

API 47 - 103 -
STATE COUNTY PERMIT

WELL TYPE: OIL XX GAS XX LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF GAS) PRODUCTION XX STORAGE ___ DEEP ___ SHALLOW XX

LOCATION: ELEVATION 933' WATER SHED BUFFALO RUN
DISTRICT GRANT COUNTY WETZEL QUADRANGLE CENTER POINT

SURFACE OWNER STATE OF WEST VIRGINIA ACREAGE +/- 3156
OIL & GAS ROYALTY J.W. DEWHURST ET AL LEASE AC +/- 3156

PROPOSED WORK: DRILL XX CONVERT ___ DRILL DEEPER ___ REDRILL ___
FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___
PERFORATE NEW FORMATION ___
OTHER PHYSICAL CHANGE IN WELL ___
PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___

TARGET FORMATION MARCELLUS SHALE ESTIMATED DEPTH 7503'

WELL OPERATOR TRANS ENERGY INC. DESIGNATED AGENT LOREN HAGLEY
ADDRESS P. O. BOX 393 ADDRESS P. O. BOX 393
ST. MARYS, WV 26170 ST. MARYS, WV 26170

ATTACHMENT D

Regulatory Discussion

Dewhurst Wells 110H & 111H

WVDEP

Regulations according to 45CSR13 are applicable to this well site and well site water separation system.

There are currently no testing requirements, only record keeping and annual reporting monitoring if additional volumes would come at a future date.

EPA / Federal

NSPS – New Source Performance Standards are NOT applicable to this site or permit application due to this filing is an "After the Fact" air permit. It is NOT a New Source. The water separation system includes four (210 Barrel) storage tanks that contain "NO Condensate" for conversation purposes, and the only criteria pollutant involved are small amounts of VOC's due to water-flash system to tanks and trace amounts of VOCs for truck unloading. NSPS - NOT applicable for this Water Separation System

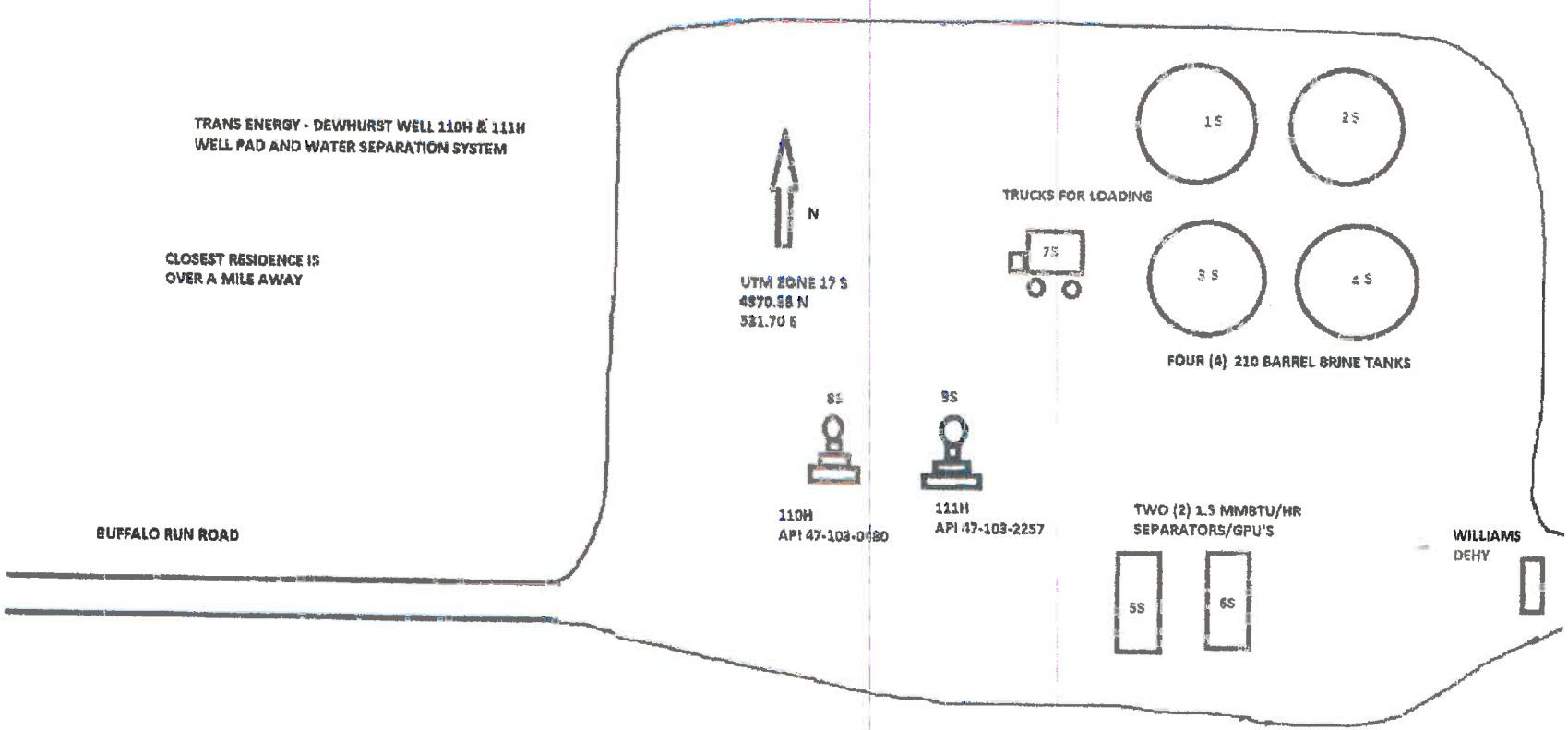
NESHAP – National Emission Standards of Hazardous Air Pollutants does is NOT applicable fo this facility because there are no HAP (Hazardous Air Pollutants) present at this facility. The only criteria pollutant involved for this water separation system are VOC's, this is the sole criteria pollutant that is over the R13 limit of 6 lbs/hr and 10 Tons/year that will be required for obtaining an Air Permit.

NESHAPs are found in 40 CFR Part 61 and 40 CFR Part 63. Part 61 NESHAPs regulate only 7 hazardous air pollutants:

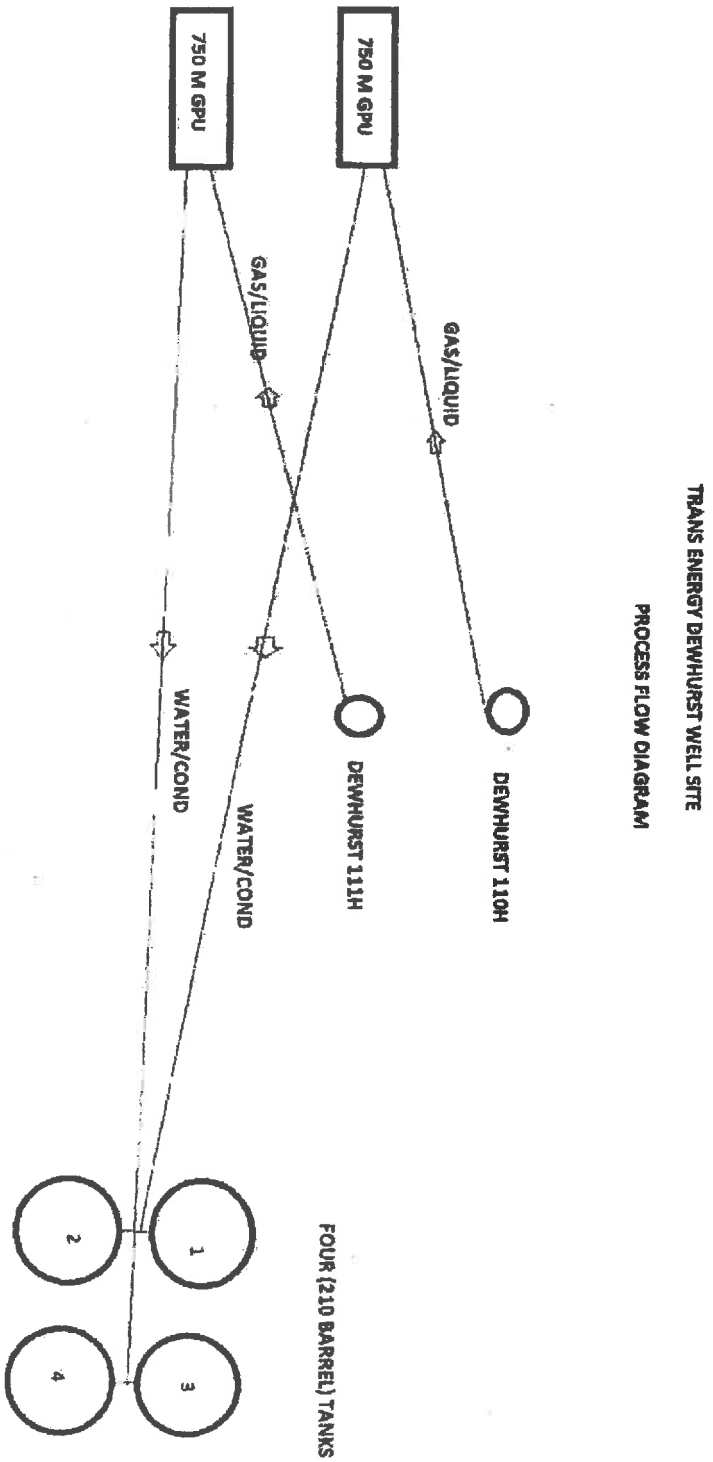
Asbestos, Beryllium, Mercury, Vinyl chloride, Benzene, Arsenic and Radon/radionuclides, none of which are present at this facility.

NSPS & NESHAP – Not Applicable, therefore no fee has been included in addition to the filing fee of $1,000.

ATTACHMENT E



ATTACHMENT F



ATTACHMENT G

DETAILED PROCESS DESCRIPTION

Natural Gas (methane, ethane, propane, etc.) comes from two (2) high pressure wells and is piped to an inlet or suction field separator & Gas Processing Unit which removes most of the water entrained in the gas stream by disturbance of the gas flow inside the separator, the water is dumped out of the separator using high pressure gas to a Two (2)210 barrel (8840 gallons) steel holding tank.

SITE Equipment (See Flow Diagram) will entail two well heads, two GPU/Separators and Four (4) 210 barrel storage tanks for used water and small amount of condensate from the wells that is in the gas stream.

Samples of the fluid (Water & small amount of condensate) were taking at a sample port before the dump valve and analyzed by FESCO labs to determine a GWR (Gas to Water Ratio) this data was used to calculate VOC emission from a water flash to the tanks. The GPU emissions were determined using AP-42 values for heat input of 1.5 MMBTU/hr for both GPU's. Tanks 4.09d was used to determine working & breathing emissions, and Truck Load loss was determined by standard calculations and attached.

The final emissions for all the pieces of equipment on this site will be the result of all airborne pollutants. The TOTAL emission PTE is just over the WV, stated thresholds of 6lbs/hr and 10 tons/year for each criteria pollutant (for VOC's only) and below 2 lbs/hr and 5 tons/year of Hazardous Air Pollutants (HAP's), a NSR 45CSR13 New Source "After-the-Fact" Air Permit is being applied for to obtain an air permit for this well water separation system.

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]
1S	1E	Brine Storage Tank	2012	210 bbl	New	NA
2S	2E	Brine Storage Tank	2012	210 bbl	New	NA
3S	3E	Brine Storage Tank	2012	210 bbl	New	NA
4S	4E	Brine Storage Tank	2012	210 bbl	New	NA
5S	5E	GPU/Separator	2012	1.5 MMBTU	New	NA
6S	6E	GPU/Separator	2012	1.5 MMBTU	New	NA
7S	7E	Truck Load Loss	Daily	8,000 gal	New	NA
8S	8E	Dewhurst Well 110H	2011-D/2012-C	3 MCFD	New	NA
9S	9E	Dewhurst Well 111H	2011-D/2012-C	3 MCFD	New	NA

[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

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^4)
		ID No	Source	ID No	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
1E, 2E, 3E, 4E	Upward hatches	1S, 2S, 3S, 4S	Tank	NA	NA	5 min/d 12 x day	365	VOC	0.062	0.2726	0.062	0.2726	Gas/vapor	EE GOR	NA
5E, 6E	Vert Stack	5S, 6S	GPU	NA	NA	24/7	8760	NOx CO VOC	0.147 0.123 0.008	0.64 0.54 0.035	0.147 0.123 0.008	0.64 0.54 0.035	Gas/Vapor	EE/ AP-42	NA
7E	Snap connect	7S	Truck Load Loss	NA	NA	2 x day 40 min/load	486	VOC	3.32	14.56	3.32	14.56	Liquid	O/EE	NA

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 K

FUGITIVE EMISSIONS DATA SUMMARY SHEET

The FUGITIVE EMISSIONS SUMMARY SHEET provides a summation of fugitive emissions. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. Note that uncaptured process 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).

APPLICATION FORMS CHECKLIST - FUGITIVE EMISSIONS
1.) Will there be haul road activities? ☐ Yes ☒ No ☐ If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET
2.) Will there be Storage Piles? ☐ Yes ☒ No ☐ If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET
3.) Will there be Liquid Loading/Unloading Operations? ☐ Yes ☒ No ☐ If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.
4.) Will there be emissions of air pollutants from Wastewater Treatment Evaporation? ☐ Yes ☒ No ☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
5.) Will there be Equipment Leaks (e.g. leaks from pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, cooling towers, etc.)? ☐ Yes ☒ No ☐ If YES, complete the LEAK SOURCE DATA SHEET section of the CHEMICAL PROCESSES EMISSIONS UNIT DATA SHEET
6.) Will there be General Clean-up VOC Operations? ☐ Yes ☒ No ☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET
7.) Will there be any other activities that generate fugitive emissions? ☒ Yes ☐ No ☒ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET or the most appropriate form.
If you answered "NO" to all of the items above, it is not necessary to complete the following table, "Fugitive Emissions Summary."

FUGITIVE EMISSIONS SUMMARY	All Regulated Pollutants Chemical Name/CAS [1]	Maximum Potential Uncontrolled Emissions [2]		Maximum Potential Controlled Emissions [3]		Est. Method Used [4]
		lb/hr	ton/yr	lb/hr	ton/yr	
Haul Road/Road Dust Emissions Paved Haul Roads						
Unpaved Haul Roads						
Storage Pile Emissions						
Loading/Unloading Operations						
Wastewater Treatment Evaporation & Operations						
Equipment Leaks		Does not apply		Does not apply		
General Clean-up VOC Emissions						
Other - Well Water Separation System	(VOC's)	3.40	14.87	3.40	14.87	EE

[1] 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.

[2] Give 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)

[3] Give 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).

[4] 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)

Attachment L
EMISSIONS UNIT DATA SHEET
STORAGE TANKS

Provide the following information for each new or modified bulk liquid storage tank as shown on the *Equipment List Form* and other parts of this application. A tank is considered modified if the material to be stored in the tank is different from the existing stored liquid.

IF USING US EPA's TANKS EMISSION ESTIMATION PROGRAM (AVAILABLE AT www.epa.gov/ttn/tanks.html), APPLICANT MAY ATTACH THE SUMMARY SHEETS IN LIEU OF COMPLETING SECTIONS III, IV, & V OF THIS FORM. HOWEVER, SECTIONS I, II, AND VI OF THIS FORM MUST BE COMPLETED. US EPA's AP-42, SECTION 7.1, "ORGANIC LIQUID STORAGE TANKS," MAY ALSO BE USED TO ESTIMATE VOC AND HAP EMISSIONS (http://www.epa.gov/ttn/chief/).

I. GENERAL INFORMATION (required)

1. Bulk Storage Area Name Dewhurst Well 110H & 111H	2. Tank Name 1S, 2S, 3S, 4S (210 bbl/each - water tanks)
3. Tank Equipment Identification No. (as assigned on *Equipment List Form*) 1S, 2S, 3S, 4S	4. Emission Point Identification No. (as assigned on *Equipment List Form*) 1E, 2E, 3E, 4E
5. Date of Commencement of Construction (for existing tanks) 2012	
6. Type of change ☐ New Construction ☐ New Stored Material ☐ Other Tank Modification	
7 Description of Tank Modification (if applicable) Not Applicable	
7A. Does the tank have more than one mode of operation? (e.g. Is there more than one product stored in the tank?) ☐ Yes ☒ No	
7B. If YES, explain and identify which mode is covered by this application (Note: A separate form must be completed for each mode).	
7C. Provide any limitations on source operation affecting emissions, any work practice standards (e.g. production variation, etc.): NA	

II. TANK INFORMATION (required)

8. Design Capacity (specify barrels or gallons). Use the internal cross-sectional area multiplied by internal height. 210 Barrels / each Four (4) Tanks	
9A. Tank Internal Diameter (ft) 10	9B. Tank Internal Height (or Length) (ft) 15
10A Maximum Liquid Height (ft) >14	10B Average Liquid Height (ft) 7
11A. Maximum Vapor Space Height (ft) <1	11B Average Vapor Space Height (ft) 8
12 Nominal Capacity (specify barrels or gallons). This is also known as "working volume" and considers design liquid levels and overflow valve heights. 210 Barrel	

13A. Maximum annual throughput (gal/yr)	13B. Maximum daily throughput (gal/day)
3,606,372	9880

14. Number of Turnovers per year (annual net throughput/maximum tank liquid volume): 730

15. Maximum tank fill rate (gal/min): 7

16. Tank fill method: ☐ Submerged ☒ Splash ☐ Bottom Loading

17. Complete 17A and 17B for Variable Vapor Space Tank Systems ☒ Does Not Apply

17A. Volume Expansion Capacity of System (gal)	17B. Number of transfers into system per year

18 Type of tank (check all that apply):

☒ Fixed Roof ___ vertical ✓ horizontal ✓ flat roof ___ cone roof ___ dome roof
___ other (describe)

☐ External Floating Roof ___ pontoon roof ___ double deck roof

☐ Domed External (or Covered) Floating Roof

☐ Internal Floating Roof ___ vertical column support ___ self-supporting

☐ Variable Vapor Space ___ lifter roof ___ diaphragm

☐ Pressurized ___ spherical ___ cylindrical

☐ Underground

☐ Other (describe)

III. TANK CONSTRUCTION & OPERATION INFORMATION (optional if providing TANKS Summary Sheets)

19. Tank Shell Construction:

☐ Riveted ☐ Gunite lined ☐ Epoxy-coated rivets ☐ Other (describe)

20A. Shell Color	20B. Roof Color	20C. Year Last Painted

21. Shell Condition (if metal and unlined):

☐ No Rust ☐ Light Rust ☐ Dense Rust ☐ Not applicable

22A. Is the tank heated? ☐ YES ☐ NO

22B. If YES, provide the operating temperature (°F)

22C. If YES, please describe how heat is provided to tank

23. Operating Pressure Range (psig): to

24. Complete the following section for **Vertical Fixed Roof Tanks** ☐ Does Not Apply

24A. For dome roof, provide roof radius (ft)

24B For cone roof, provide slope (ft/ft)

25. Complete the following section for **Floating Roof Tanks** ☐ Does Not Apply

25A. Year Internal Floaters Installed:

25B Primary Seal Type: (check one) ☐ Metallic (Mechanical) Shoe Seal ☐ Liquid Mounted Resilient Seal ☐ Vapor Mounted Resilient Seal ☐ Other (describe):

25C Is the Floating Roof equipped with a Secondary Seal? ☐ YES ☐ NO

25D. If YES, how is the secondary seal mounted? (check one) ☐ Shoe ☐ Rim ☐ Other (describe)

25E. Is the Floating Roof equipped with a weather shield? ☐ YES ☐ NO

25F Describe deck fittings; indicate the number of each type of fitting:		
ACCESS HATCH		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
AUTOMATIC GAUGE FLOAT WELL		
BOLT COVER, GASKETED:	UNBOLTED COVER, GASKETED:	UNBOLTED COVER, UNGASKETED:
COLUMN WELL		
BUILT-UP COLUMN – SLIDING COVER, GASKETED:	BUILT-UP COLUMN – SLIDING COVER, UNGASKETED:	PIPE COLUMN – FLEXIBLE FABRIC SLEEVE SEAL:
LADDER WELL		
PIP COLUMN – SLIDING COVER, GASKETED:	PIPE COLUMN – SLIDING COVER, UNGASKETED:	
GAUGE-HATCH/SAMPLE PORT		
SLIDING COVER, GASKETED:	SLIDING COVER, UNGASKETED:	
ROOF LEG OR HANGER WELL		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	SAMPLE WELL-SLIT FABRIC SEAL (10% OPEN AREA)
VACUUM BREAKER		
WEIGHTED MECHANICAL ACTUATION, GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
RIM VENT		
WEIGHTED MECHANICAL ACTUATION GASKETED:	WEIGHTED MECHANICAL ACTUATION, UNGASKETED:	
DECK DRAIN (3-INCH DIAMETER)		
OPEN:	90% CLOSED:	
STUB DRAIN		
1-INCH DIAMETER:		
OTHER (DESCRIBE, ATTACH ADDITIONAL PAGES IF NECESSARY)		

26. Complete the following section for Internal Floating Roof Tanks ☐ Does Not Apply	
26A. Deck Type: ☐ Bolted ☐ Welded	
26B. For Bolted decks, provide deck construction:	
26C. Deck seam: ☐ Continuous sheet construction 5 feet wide ☐ Continuous sheet construction 6 feet wide ☐ Continuous sheet construction 7 feet wide ☐ Continuous sheet construction 5 × 7.5 feet wide ☐ Continuous sheet construction 5 × 12 feet wide ☐ Other (describe)	
26D. Deck seam length (ft)	26E. Area of deck (ft^2)
For column supported tanks: 26F. Number of columns:	26G. Diameter of each column:

IV. SITE INFORMANTION (optional if providing TANKS Summary Sheets)

27 Provide the city and state on which the data in this section are based.
28. Daily Average Ambient Temperature (°F)
29. Annual Average Maximum Temperature (°F)
30. Annual Average Minimum Temperature (°F)
31. Average Wind Speed (miles/hr)
32. Annual Average Solar Insulation Factor (BTU/(ft^2·day))
33. Atmospheric Pressure (psia)

V. LIQUID INFORMATION (optional if providing TANKS Summary Sheets)

34. Average daily temperature range of bulk liquid:	
34A. Minimum (°F)	34B. Maximum (°F)
35. Average operating pressure range of tank:	
35A. Minimum (psig)	35B. Maximum (psig)
36A. Minimum Liquid Surface Temperature (°F)	36B. Corresponding Vapor Pressure (psia)
37A. Average Liquid Surface Temperature (°F)	37B. Corresponding Vapor Pressure (psia)
38A. Maximum Liquid Surface Temperature (°F)	38B Corresponding Vapor Pressure (psia)

39. Provide the following for <u>each</u> liquid or gas to be stored in tank. Add additional pages if necessary.

39A. Material Name or Composition			
39B. CAS Number			
39C. Liquid Density (lb/gal)			
39D. Liquid Molecular Weight (lb/lb-mole)			
39E. Vapor Molecular Weight (lb/lb-mole)			

Maximum Vapor Pressure 39F. True (psia) 39G. Reid (psia)			
Months Storage per Year 39H. From 39I. To			

VI. EMISSIONS AND CONTROL DEVICE DATA (required)

40. Emission Control Devices (check as many as apply): ☒ Does Not Apply

- ☐ Carbon Adsorption[1]
- ☐ Condenser[1]
- ☐ Conservation Vent (psig)
  - Vacuum Setting — Pressure Setting
- ☐ Emergency Relief Valve (psig)
- ☐ Inert Gas Blanket of
- ☐ Insulation of Tank with
- ☐ Liquid Absorption (scrubber)[1]
- ☐ Refrigeration of Tank
- ☐ Rupture Disc (psig)
- ☐ Vent to Incinerator[1]
- ☐ Other[1] (describe):

[1] Complete appropriate Air Pollution Control Device Sheet.

41. Expected Emission Rate (submit Test Data or Calculations here or elsewhere in the application).

Material Name & CAS No.	Breathing Loss (lb/hr)	Working Loss Amount	Working Loss Units	Annual Loss (lb/yr)	Estimation Method[1]
VOC	.00018	.00018	lbs/hr	3.2	EPA

[1] EPA = EPA Emission Factor, MB = Material Balance, SS = Similar Source, ST = Similar Source Test, Throughput Data, O = Other (specify)

☒ Remember to attach emissions calculations, including TANKS Summary Sheets if applicable.

ATTACHMENT N

Trans Energy Dewhurst Well Site 110H & 111H

1. Two (2) 750,000 BTU/hr. GPU (Gas Processing Units / Separators) AP-42 Emissions
2. Four 210 Barrel Storage Tanks – 4.09d, Produced Water Emission Results, Truck Load Loss

Produced Water Emission Results

Cubic Feet of Gas Liberated from Produced Water
Cubic Feet/Year = (GWR = Cubic FT^3/Barrel) (Barrel/year)
From FESCO Report Stock Tank GWR = 3.49 FT^3/Barrel
Barrels/day = From Trans Energy Report of 85620 Barrels/Year
(3.49) (85620) = 298,814 Cubic Feet of Gas Liberated per year (FT^3/year)

Convert Cubic Feet of gas liberated to Tons of emissions per year using following methodology

FT^3/year = 298,814
MW = 18.18 from gas analysis

TPY = (MW) (FT^3/Year) (28,317 cm^3/FT^3) (gr-mole/23,890 cm^3) (lb-mole/454 gr-mole) (ton-mole/2000 lb-mole)

Tons/year = 7.092 = 7.10 Tons/year

Tons CO2/year = (wt%CO2/100) (Tons/year) = wt%CO2 = 4.199 = (4.199/100) (7.1) = 0.29 TPY

~~Tons CH4/year = (wt%CH4/100) (Tons/year) = wt%CH4 = 78.023 = (78.023/100) (7.1) = 5.5 TPY~~

From Gas Analysis Attached VOC's (NMNEHC) 100 – 78.023 WT% Methane – 13.954 WT% Ethane – 4.199 WT% CO2 = 3.824 WT% NMNEHC (VOC's) = 3.824 WT%

Tons VOC (NMNEHC)/Year = (wt%C3+/100) = wt%VOC = (3.824/100) (7.1) = 0.271 Tons/Year

VOC's = 0.271 TPY

HAP's (BTEX) Benzene, Toluene, Ethyl benzene, Xylene, Hexane = 0.181 WT% = 0.00181 %
HAP's (0.00181) (7.1) = **0.013 TPY HAPS**

Total Well Site VOC Emissions Water Flash 0.271 TPY + W&B 0.0016 TPY + GPU's 0.035 TPY + LL 14.56 TPY
Total VOC = 14.87 Tons/Year

GHG (CO2(e)) = 772 separators + 0.29 water flash = 773 TPY
GHG(CH4) = 0.014 separators + 5.5 water flash = 5.51 TPY

ATTACHMENT N(cont..)

Date: March 19, 2014

Owner of Source: Trans Energy, Inc. Site: Dewhurst Well site

County: Wetzel

Latitude/Longitude: 39° 28' 29.0" N / 80° 37' 32.6" W

Mass Emission Calculations for a Natural Gas Engine Stationary Source

Make GPU QTY 2 Model 750MBTU/hr

Fuel /Heat Input (BTU/bhp-hr) 8240 BTU/scf 1142 SCF/hr 1407

Heat Input (MMBTU/hr) 1.50

EPA AP-42 Uncontrolled Emission Factors for 4SLB from Table 3.2-3

Pollutant	(lb/MMBTU)	lb/hr	Ton/Year lb/hr*8760/2000	Method AP-42
NOx	0.098	0.147	0.64	AP-42
CO	0.082	0.123	0.54	AP-42
VOC	0.005	0.008	0.035	AP-42
HCHO	NA	NA	NA	AP-42
PM(filter)	NA	NA	NA	AP-42
SOx	NA	NA	NA	AP-42
CO2(e) GHG	117.64	176.5	772	EPA Website
CH4	0.002	0.003	0.014	

Trans Energy Corporation

Dewhurst 110H & 111H Location

Truck Loading Emissions

$LL = 12.46 \times [(S*P*M) \div T] \times (1\text{-}EFF/1)$

$LL = 12.46 \times [(1.00 * 4.73 * 18.18) \div (70^{o}F + 460)] \times (1 - (0))$

$LL = 12.46 \times [86 \div 530] \times 1$

$LL = 12.46 \times 0.593 \times 1$

$LL = 2.02$

LL = 2.02 pounds per 1,000 gallons

Where:

LL = loading loss, pounds per 1,000 gallons

S = saturation factor (Table 5.2-1)

P = true vapor pressure of liquid loaded (psia)

M = Molecular weight of vapors

T = temperature of bulk liquid loaded, ^{o}R (^{o}F + 460)

EFF = VRU reduction efficiency

Total: (Dewhurst) (85866 bbl/year = 3,606,372 gallons/year) – Water & Condensate for both wells

3,606,372 ÷ 1,000 = 3606

3,606,372 gal x 2.02 lbs/1000 gal = 7284 lbs of VOC annual for **Dewhurst Tank 1, 2, 3, 4 = 3.64 TPY**

As per WVDAQ suggestion, no control or capture efficiency and must list PTE (potential to emit)

~~Assume loading into trucks that are leak tested based on NSPS Subpart XX with a capture efficiency of 98.7%.~~

~~(3.64 Tons/year) x (1-0.987) = 0.05 TPY~~

~~Vapor balance service is a line hose connected to top of tank truck sending the vapors back to the tank being unloaded. Control efficiency 95% x 70% by AP-42~~

Four (2) 210 Barrel Tanks piped in Tandem = VOC (4 x 3.64) = 14.56 Tons/year VOC Truck Load Loss

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Dewhurst
City	Charleston
State:	West Virginia
Company:	Trans Energy
Type of Tank:	Vertical Fixed Roof Tank
Description:	Two Well Sites 110H & 111H

Tank Dimensions

Shell Height (ft):	12.00
Diameter (ft):	10.00
Liquid Height (ft)	11.00
Avg. Liquid Height (ft):	6.00
Volume (gallons):	6,462.73
Turnovers:	1.70
Net Throughput(gal/yr):	10,986.63
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Gray/Medium
Shell Condition	Good
Roof Color/Shade:	Gray/Medium
Roof Condition:	Good

Roof Characteristics

Type:	Dome	
Height (ft)		0.00
Radius (ft) (Dome Roof)		0.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Charleston, West Virginia (Avg Atmospheric Pressure = 14.25 psia)

ATTACHMENT N (Cont...)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Dewhurst - Vertical Fixed Roof Tank
Charleston, West Virginia

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F) Avg	Min	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol Weight	Basis for Vapor Pressure Calculations
Jet kerosene	All	63.43	53.60	73.25	58.06	0.0094	0.0069	0.0123	130.0000			162.00	Option 1: VP60 = .0085 VP70 = .011

ATTACHMENT N (Cont...)

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Dewhurst - Vertical Fixed Roof Tank
Charleston, West Virginia

Annual Emission Calculations	
Standing Losses (lb):	2.9525
Vapor Space Volume (cu ft):	525.1097
Vapor Density (lb/cu ft):	0.0002
Vapor Space Expansion Factor:	0.0713
Vented Vapor Saturation Factor	0.9957
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	525.1097
Tank Diameter (ft):	10.0000
Vapor Space Outage (ft)	6.6859
Tank Shell Height (ft)	12.0000
Average Liquid Height (ft):	6.0000
Roof Outage (ft):	0.6859
Roof Outage (Dome Roof)	
Roof Outage (ft):	0.6859
Dome Radius (ft):	10.0000
Shell Radius (ft)	5.0000
Vapor Density	
Vapor Density (lb/cu ft)	0.0002
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0094
Daily Avg. Liquid Surface Temp. (deg. R):	523.0962
Daily Average Ambient Temp. (deg. F):	54.9833
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	517.7333
Tank Paint Solar Absorptance (Shell):	0.6800
Tank Paint Solar Absorptance (Roof):	0.6800
Daily Total Solar Insulation Factor (Btu/sqft day):	1,250.5726
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0713
Daily Vapor Temperature Range (deg. R)	39.3149
Daily Vapor Pressure Range (psia):	0.0054
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0094
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0069
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0123
Daily Avg. Liquid Surface Temp. (deg R):	523.0962
Daily Min. Liquid Surface Temp. (deg R):	513.2675
Daily Max. Liquid Surface Temp. (deg R):	532.9249
Daily Ambient Temp. Range (deg. R):	21.5333
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9957
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia)	0.0094
Vapor Space Outage (ft):	6.6859
Working Losses (lb):	0.3182

ATTACHMENT N (Cont...)

Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0094
Annual Net Throughput (gal/yr.):	10,998.6347
Annual Turnovers:	1.7000
Turnover Factor:	1.0000
Maximum Liquid Volume (gal):	6,462.7263
Maximum Liquid Height (ft):	11.0000
Tank Diameter (ft):	10.0000
Working Loss Product Factor:	1.0000

Total Losses (lb):	3.2706

ATTACHMENT N (Cont...)

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Dewhurst - Vertical Fixed Roof Tank
Charleston, West Virginia

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Jet kerosene	0.32	2.95	3.27

ATTACHMENT N (Cont...)

USED CORRELATION OF KEROSENE TO ACTUAL CONDENSATE IN DEWHURST TANKS SINCE THERE WAS NO CONDENSATE IN STOCK TANK FLUID TO BE ANALYZED CONTENT WAS MOSTLY MUD AND WATER

WORKING EMISSIONS $.32 \frac{lbs}{yr} = .0016$ TPY

BREATHING EMISSIONS $2.95 \frac{lbs}{yr} = .0015$ TPY

TOTAL = .0016 TPY

ATTACHMENT N (Cont...)

September 20, 2013

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: Trans Energy Inc.
P. O. Box 393
St. Marys, West Virginia 26170

Date Sampled: 09/09/13

Date Analyzed: 09/17/13

Job Number: J35535

Sample: Dewhurst Site

FLASH LIBERATION OF SEPARATOR WATER		
	Separator	Stock Tank
Pressure, psig	926	0
Temperature, °F	100	70
Gas Water Ratio (1)	----	3.49
Gas Specific Gravity (2)	----	0.629
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: A.A

Piston No.: WF-305*

Base Conditions: 14.85 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

September 18, 2013

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: Trans Energy Inc.
P. O. Box 393
St. Marys, West Virginia 26170

Sample: Dewhurst Site
Gas Liberated from Separator Water
From 926 psig & 100 °F to 0 psig & 70 °F

Date Sampled: 09/09/13 Job Number: 35535.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.000	
Carbon Dioxide	1.735	
Methane	88.441	
Ethane	8.439	2.275
Propane	1.057	0.294
Isobutane	0.073	0.024
n-Butane	0.116	0.037
2-2 Dimethylpropane	0.000	0.000
Isopentane	0.024	0.009
n-Pentane	0.021	0.008
Hexanes	0.028	0.012
Heptanes Plus	0.066	0.025
Totals	100.000	2.683

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.295	(Air=1)
Molecular Weight	95.18	
Gross Heating Value	4907	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.629	(Air=1)
Compressibility (Z)	0.9974	
Molecular Weight	18.18	
Gross Heating Value		
Dry Basis	1096	BTU/CF
Saturated Basis	1078	BTU/CF

*Hydrogen Sulfide tested in laboratory by: Stained Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.850 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

Analyst: MR
Processor: ANB
Cylinder ID: WF# 2 S

David Dannhaus 361-661-7015

FESCO, Ltd.

Job Number: 35535.001

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.000		0.000
Carbon Dioxide	1.735		4.199
Methane	88.441		78.023
Ethane	8.439	2.275	13.954
Propane	1.057	0.294	2.563
Isobutane	0.073	0.024	0.233
n-Butane	0.116	0.037	0.371
2,2 Dimethylpropane	0.000	0.000	0.000
Isopentane	0.024	0.009	0.095
n-Pentane	0.021	0.008	0.083
2,2 Dimethylbutane	0.000	0.000	0.000
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.004	0.002	0.019
2 Methylpentane	0.008	0.003	0.038
3 Methylpentane	0.005	0.002	0.024
n-Hexane	0.011	0.005	0.052
Methylcyclopentane	0.006	0.002	0.028
Benzene	0.012	0.003	0.052
Cyclohexane	0.004	0.001	0.019
2-Methylhexane	0.000	0.000	0.000
3-Methylhexane	0.004	0.002	0.022
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.003	0.001	0.016
n-Heptane	0.004	0.002	0.022
Methylcyclohexane	0.006	0.002	0.032
Toluene	0.014	0.005	0.071
Other C8's	0.003	0.001	0.018
n-Octane	0.002	0.001	0.013
Ethylbenzene	0.000	0.000	0.000
M & P Xylenes	0.004	0.002	0.023
O-Xylene	0.000	0.000	0.000
Other C9's	0.000	0.000	0.000
n-Nonane	0.002	0.001	0.014
Other C10's	0.000	0.000	0.000
n-Decane	0.002	0.001	0.016
Undecanes (11)	0.000	0.000	0.000
Totals	100.000	2.683	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.629	(Air=1)
Compressibility (Z)	0.9974	
Molecular Weight	18.18	
Gross Heating Value		
Dry Basis	1096	BTU/CF
Saturated Basis	1078	BTU/CF

September 20, 2013

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: Trans Energy Inc.
P. O. Box 393
St. Marys, West Virginia 26170

Sample: Dewhurst Site
Meter Run Gas
Sampled @ 926 psig & 100 °F

Date Sampled: 09/09/13 Job Number: 35535.011

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Nitrogen	0.448	
Carbon Dioxide	0.155	
Methane	85.080	
Ethane	10.855	2.926
Propane	2.410	0.669
Isobutane	0.306	0.101
n-Butane	0.419	0.133
2-2 Dimethylpropane	0.010	0.004
Isopentane	0.115	0.042
n-Pentane	0.074	0.027
Hexanes	0.069	0.029
Heptanes Plus	0.059	0.026
Totals	100.000	3.958

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.573	(Air=1)
Molecular Weight	103.20	
Gross Heating Value	5526	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.653	(Air=1)
Compressibility (Z)	0.9971	
Molecular Weight	18.86	
Gross Heating Value		
Dry Basis	1166	BTU/CF
Saturated Basis	1146	BTU/CF

Base Conditions: 14.850 PSI & 60 Deg F

Certified: FESCO, Ltd. Alice, Texas

Analyst: MR
Processor: ANB
Cylinder ID: T-3147

David Dannhaus 361-661-7015

ATTACHMENT N (Cont...)

FESCO, Ltd.

Job Number: 35535.011

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Nitrogen	0.448		0.666
Carbon Dioxide	0.155		0.362
Methane	85.080		72.390
Ethane	10.855	2.926	17.311
Propane	2.410	0.669	5.636
Isobutane	0.306	0.101	0.943
n-Butane	0.419	0.133	1.292
2,2 Dimethylpropane	0.010	0.004	0.038
Isopentane	0.115	0.042	0.440
n-Pentane	0.074	0.027	0.283
2,2 Dimethylbutane	0.006	0.003	0.027
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.006	0.002	0.027
2 Methylpentane	0.023	0.010	0.105
3 Methylpentane	0.015	0.006	0.069
n-Hexane	0.019	0.008	0.087
Methylcyclopentane	0.002	0.001	0.009
Benzene	0.001	0.000	0.004
Cyclohexane	0.002	0.001	0.009
2-Methylhexane	0.007	0.003	0.037
3-Methylhexane	0.007	0.003	0.037
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.009	0.004	0.047
n-Heptane	0.006	0.003	0.032
Methylcyclohexane	0.005	0.002	0.026
Toluene	0.002	0.001	0.010
Other C8's	0.009	0.004	0.053
n-Octane	0.002	0.001	0.012
Ethylbenzene	0.000	0.000	0.000
M & P Xylenes	0.001	0.000	0.006
O-Xylene	0.000	0.000	0.000
Other C9's	0.004	0.002	0.027
n-Nonane	0.001	0.001	0.007
Other C10's	0.000	0.000	0.000
n-Decane	0.001	0.001	0.008
Undecanes (11)	0.000	0.000	0.000
Totals	100.000	3.958	100.000

Computed Real Characteristics of Total Sample

Specific Gravity	0.653	(Air=1)
Compressibility (Z)	0.9971	
Molecular Weight	18.86	

Gross Heating Value

Dry Basis	1166	BTU/CF
Saturated Basis	1146	BTU/CF

September 20, 2013

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

Sample: Dewhurst Site
Meter Run Gas
Sampled @ 926 psig & 100 °F

Date Sampled: 09/09/13

Job Number: 35535.011

GLYCALC FORMAT

COMPONENT	MOL%	GPM	Wt %
Carbon Dioxide	0.155		0.362
Hydrogen Sulfide	---		---
Nitrogen	0.448		0.666
Methane	85.080		72.390
Ethane	10.855	2.926	17.311
Propane	2.410	0.669	5.636
Isobutane	0.305	0.101	0.943
n-Butane	0.429	0.137	1.330
Isopentane	0.115	0.042	0.440
n-Pentane	0.074	0.027	0.283
Cyclopentane	0.000	0.000	0.000
n-Hexane	0.019	0.008	0.087
Cyclohexane	0.002	0.001	0.009
Other C6's	0.050	0.021	0.228
Heptanes	0.031	0.014	0.162
Methylcyclohexane	0.005	0.002	0.026
2,2,4 Trimethylpentane	0.000	0.000	0.000
Benzene	0.001	0.000	0.004
Toluene	0.002	0.001	0.010
Ethylbenzene	0.000	0.000	0.000
Xylenes	0.001	0.000	0.006
Octanes Plus	0.017	0.008	0.107
Totals	100.000	3.958	100.000

Real Characteristics Of Octanes Plus:

Specific Gravity	4.065	(Air=1)
Molecular Weight	117.41	
Gross Heating Value	6110	BTU/CF

Real Characteristics Of Total Sample:

Specific Gravity	0.653	(Air=1)
Compressibility (Z)	0.9971	
Molecular Weight	18.86	
Gross Heating Value		
Dry Basis	1166	BTU/CF
Saturated Basis	1146	BTU/CF

Wetzel Chronicle Print Ad Proof

ADNo: 12875 Customer Number: L00445
Customer Name: DEBRA MARTIN Company: TRANS ENERGY
Address: 210 2ND STREE PO BOX 393
City/St/Zip: ST MARYS ,WV 26170
Phone: (304) 684-3658 Solicitor: DW
Category: 10 Class: 1000 Rate: LE-0 Start: 3-9-2016 Stop: 3-9-2016
Lines: 35 Inches: 3.40 Words: 184

Credit Card: Expire:
Order Number:
Cost: 34.27 Extra Charges: .00 Adjustments: .00
Payments: .00 Discount: .00
Balance: 34.27

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that Trans Energy, Inc., has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for an After-the-Fact New Source Review Permit for a Well Site Water Separation System located on Campbell Run Road, Jacksonburg, in Wetzel County, West Virginia. The latitude and longitude coordinates are: 39.47472N & 80.62572W

The applicant estimates the potential to discharge the following Regulated Air Pollutants will be: NOx=0.64 TPY CO=0.54 TPY, VOC=14.87 TPY, HAPs=0.013 TPY, GHG(COEe)=773 TPY & GHG(CH4)=5.51 TPY.

Startup of operation has commenced, this is an After-the-Fact permit. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57thStreet, 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 1227, during normal business hours.

Dated this 3rdday of March 2016.

By:
Trans Energy, Inc.
Leslie A. Gearhart
Vice President of Operations
P.O. Box 393
St. Marys, WV 26170
WC-3-9 12875