



June 8, 2017  
Kleinfelder Project No.: 20171806

Assistant Director for Permitting  
WV Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304

**SUBJECT: Antero Midstream LLC – South Canton Compressor Station  
West Virginia Department of Environmental Protection, Division of Air  
Quality, 45CSR13 Class I Administrative Update**

On behalf of Antero Midstream LLC (Antero), please find attached a 45CSR13 Class I Administrative Update for the South Canton Compressor Station located in Doddridge County, West Virginia. The South Canton Compressor Station is currently permitted under R13-3354 with Plant ID No. 017-00163.

Permit R13-3354 contains permit conditions for two Alternate Operating Scenarios (AOS) for the dehydrators at the facility with the intent that only one AOS will be implemented. The first scenario, AOS1, will send the dehydrator still vent gas through a BTEX condenser and then a flare with 98% control efficiency. The dehydrator flash tank gas will either be used as fuel in the reboiler or be sent to the VRU system for control. One flare will control all the still vents at the facility. In the second scenario, AOS2, the dehydrator still vent and flash tank gas will go to a thermal oxidizer with 98% control efficiency. Each dehydrator in AOS2 will have a dedicated thermal oxidizer, but will not be equipped with a BTEX condenser unit. Emissions from the dehydrators themselves will be the same in both AOS1 and AOS2, however, the emissions from a single flare versus multiple thermal oxidizers differ. At this time, Antero has selected to install and operate AOS1 with the flare and BTEX condensers.

Permit condition 6.0 of R13-3354, states that a Class I Administrative Update shall be submitted to remove permit language pertaining to the AOS that was not selected; this application is being submitted to satisfy this permit condition. The following are the permit conditions which should be removed as they pertain to AOS2 and the thermal oxidizers:

- Table 1.0 – Remove Emission Units TO-1, TO-2, and TO-3;
- Table 1.1 – Remove thermal oxidizer control devices;
- Permit condition 6.0 – Remove introductory language pertaining to the dual AOS in italics and AOS2 from the section header;
- Permit conditions 6.1.6 and 6.1.7 – Remove entire sections pertaining to the thermal oxidizers;
- Permit conditions 6.2.1 and 6.4.1 – Remove reference to permit condition 6.1.6b;
- Permit condition 6.3.1 – Remove reference to permit condition 6.1.6f; and
- Permit condition 6.5.3 – Remove reference to permit condition 6.1.6.

Additionally, per permit conditions 2.18 and 6.0, a notification will be made no later than 30 days after startup of the equipment in AOS1 verifying that AOS1 was chosen over AOS2.

Lastly, a typographical error was also noted in permit condition 6.1.1. The maximum dry natural gas throughput to each TEG dehydration unit should not exceed 150 million standard cubic feet per day (mmscfd) rather than the 110 mmscfd as stated in permit condition 6.1.1. The air permit application as well as other sections of the permit use the 150 mmscfd value, including the emission calculations, so the value in permit condition 6.1.1 has been verified as a typographical error.

As this Class I Administrative Update did not change any of the original permit application attachments, just the Application for NSR Permit is attached. Further, no permit fee or public notice has been submitted as these items are not required for a Class I Administrative Update.

Please call if you have any questions or if I can be of further assistance. I can be reached at (719)632-3593 or by email at [kmeszaros@kleinfelder.com](mailto:kmeszaros@kleinfelder.com).

Sincerely,

**KLEINFELDER**



Kaitlin Meszaros  
Air Quality Professional

Enclosure: South Canton Compressor Station Class I Administrative Update

Additionally, per permit conditions 2.18 and 6.0, a notification will be made no later than 30 days after startup of the equipment in AOS1 verifying that AOS1 was chosen over AOS2.

Lastly, a typographical error was also noted in permit condition 6.1.1. The maximum dry natural gas throughput to each TEG dehydration unit should not exceed 150 million standard cubic feet per day (mmscfd) rather than the 110 mmscfd as stated in permit condition 6.1.1. The air permit application as well as other sections of the permit use the 150 mmscfd value, including the emission calculations, so the value in permit condition 6.1.1 has been verified as a typographical error.

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Sincerely,

**KLEINFELDER**



Kaitlin Meszaros  
Air Quality Professional

Enclosure: South Canton Compressor Station Class I Administrative Update



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**DIVISION OF AIR QUALITY**

601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
(304) 926-0475  
[www.dep.wv.gov/daq](http://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): Antero Midstream LLC		2. Federal Employer ID No. (FEIN): 46-5517375	
3. Name of facility (if different from above): South Canton Compressor Station		4. The applicant is the: <input type="checkbox"/> OWNER <input type="checkbox"/> OPERATOR <input checked="" type="checkbox"/> BOTH	
5A. Applicant's mailing address: 1615 Wynkoop Street Denver, CO 80202		5B. Facility's present physical address: Nutter Fork Rd West Union, WV	
6. <b>West Virginia Business Registration.</b> Is the applicant a resident of the State of West Virginia? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO – If <b>YES</b> , provide a copy of the <b>Certificate of Incorporation/Organization/Limited Partnership</b> (one page) including any name change amendments or other Business Registration Certificate as <b>Attachment A</b> . – If <b>NO</b> , provide a copy of the <b>Certificate of Authority/Authority of L.L.C./Registration</b> (one page) including any name change amendments or other Business Certificate as <b>Attachment A</b> .			
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 <i>proposed site</i> ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO – If <b>YES</b> , please explain:    Antero Midstream LLC owns the land for the proposed site. – If <b>NO</b> , you are not eligible for a permit for this source.			
9. Type of plant or facility (stationary source) to be <b>constructed, modified, relocated, administratively updated</b> or <b>temporarily permitted</b> (e.g., coal preparation plant, primary crusher, etc.): Natural Gas Compressor Station		10. North American Industry Classification System (NAICS) code for the facility: 221210	
11A. DAQ Plant ID No. (for existing facilities only): 017-00163		11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): R13-3354	

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

<p>12A.</p> <ul style="list-style-type: none"> <li>– For <b>Modifications, Administrative Updates or Temporary permits</b> at an existing facility, please provide directions to the <i>present location</i> of the facility from the nearest state road;</li> <li>– For <b>Construction or Relocation permits</b>, please provide directions to the <i>proposed new site location</i> from the nearest state road. Include a <b>MAP as Attachment B</b>.</li> </ul> <p>From the intersection of U.S. 50 and WV-18 near West Union, WV, head north (northwest) on WV-18N for 0.5 miles. Take a right on Main Street and then a left on Davis Street. In 0.2 miles at the round-a-bout, keep to the right to stay on Davis Street. After 0.2 miles, turn right onto WV-18N/Sisterville Pike and drive for 5.1 miles. Turn right on Nutter Fork (Rte 28) and drive for 0.8 miles. The facility driveway will be on the left.</p>		
<p>12.B. New site address (if applicable): Nutter Fork Rd West Union, WV</p>	<p>12C. Nearest city or town: West Union</p>	<p>12D. County: Doddridge</p>
<p>12.E. UTM Northing (KM): 4353.883</p>	<p>12F. UTM Easting (KM): 516.949</p>	<p>12G. UTM Zone: 17</p>
<p>13. Briefly describe the proposed change(s) at the facility: Class I Administrative update to remove language in the permit that pertained to the thermal oxidizers and Alternate Operating Scenario 2 (AOS2).</p>		
<p>14A. Provide the date of anticipated installation or change: Implemented</p> <ul style="list-style-type: none"> <li>– If this is an <b>After-The-Fact</b> permit application, provide the date upon which the proposed change did happen:     /     /</li> </ul>	<p>14B. Date of anticipated Start-Up if a permit is granted: January 2018</p>	
<p>14C. Provide a <b>Schedule</b> of the planned <b>Installation of/Change</b> to and <b>Start-Up</b> of each of the units proposed in this permit application as <b>Attachment C</b> (if more than one unit is involved).</p>		
<p>15. Provide maximum projected <b>Operating Schedule</b> of activity/activities outlined in this application: Hours Per Day 24      Days Per Week 7      Weeks Per Year 52</p>		
<p>16. Is demolition or physical renovation at an existing facility involved?    <input type="checkbox"/> <b>YES</b>      <input checked="" type="checkbox"/> <b>NO</b></p>		
<p>17. <b>Risk Management Plans.</b> If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see <a href="http://www.epa.gov/ceppo">www.epa.gov/ceppo</a>), submit your <b>Risk Management Plan (RMP)</b> to U. S. EPA Region III.</p>		
<p>18. <b>Regulatory Discussion.</b> List all Federal and State air pollution control regulations that you believe are applicable to the proposed process (<i>if known</i>). 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 (<i>if known</i>). Provide this information as <b>Attachment D</b>.</p>		
<p><b>Section II. Additional attachments and supporting documents.</b></p>		
<p>19. Include a check payable to WVDEP – Division of Air Quality with the appropriate <b>application fee</b> (per 45CSR22 and 45CSR13).</p>		
<p>20. Include a <b>Table of Contents</b> as the first page of your application package.</p>		
<p>21. Provide a <b>Plot Plan</b>, 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 <b>Attachment E</b> (Refer to <b>Plot Plan Guidance</b>) .</p> <ul style="list-style-type: none"> <li>– Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).</li> </ul>		
<p>22. Provide a <b>Detailed Process Flow Diagram(s)</b> showing each proposed or modified emissions unit, emission point and control device as <b>Attachment F</b>.</p>		
<p>23. Provide a <b>Process Description</b> as <b>Attachment G</b>.</p> <ul style="list-style-type: none"> <li>– Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).</li> </ul>		
<p><b>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</b></p>		

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:

<input type="checkbox"/> Bulk Liquid Transfer Operations	<input type="checkbox"/> Haul Road Emissions	<input type="checkbox"/> Quarry
<input type="checkbox"/> Chemical Processes	<input type="checkbox"/> Hot Mix Asphalt Plant	<input type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities
<input type="checkbox"/> Concrete Batch Plant	<input type="checkbox"/> Incinerator	<input type="checkbox"/> Storage Tanks
<input type="checkbox"/> Grey Iron and Steel Foundry	<input type="checkbox"/> Indirect Heat Exchanger	
<input type="checkbox"/> 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:

<input type="checkbox"/> Absorption Systems	<input type="checkbox"/> Baghouse	<input type="checkbox"/> Flare
<input type="checkbox"/> Adsorption Systems	<input type="checkbox"/> Condenser	<input type="checkbox"/> Mechanical Collector
<input type="checkbox"/> Afterburner	<input type="checkbox"/> Electrostatic Precipitator	<input type="checkbox"/> Wet Collecting System
<input type="checkbox"/> 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:

<input type="checkbox"/> Authority of Corporation or Other Business Entity	<input type="checkbox"/> Authority of Partnership
<input type="checkbox"/> Authority of Governmental Agency	<input type="checkbox"/> 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 W. Neilly (Please use blue ink) DATE: 6/10/17 (Please use blue ink)

35B. Printed name of signee: Ward McNeilly		35C. Title: Vice President, Reserves Planning and Midstream
35D. E-mail: <a href="mailto:wmcneilly@anteroresources.com">wmcneilly@anteroresources.com</a>	36E. Phone: (303) 357-6822	36F. FAX: (303)357-7315
36A. Printed name of contact person (if different from above): Barry Schatz		36B. Title: Senior Environmental and Regulatory Manager
36C. E-mail: <a href="mailto:bschatz@anteroresources.com">bschatz@anteroresources.com</a>	36D. Phone: (303) 357-7276	36E. FAX: (303)357-7315

**PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:**

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