



west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: R13-3060
Plant ID No.: 103-00065
Applicant: Stone Energy Corporation (Stone)
Facility Name: Winters Compressor Station
Location: New Martinsville, Wetzel County
NAICS Code: 486210 (Pipeline Transportation of Natural Gas)
Application Type: Construction
Received Date: March 19, 2013
Engineer Assigned: Jerry Williams, P.E.
Fee Amount: \$2,000.00
Date Received: March 19, 2013
Complete Date: April 12, 2013
Due Date: July 11, 2013
Applicant Ad Date: March 27, 2013
Newspaper: *Wetzel Chronicle*
UTM's: Easting: 516.139 km Northing: 4,389.060 km Zone: 17
Description: Proposal to construct and operate a natural gas compressor facility with three (3) natural gas fired reciprocating internal combustion engines, one (1) flash gas compressor, one (1) natural gas fired generator, one (1) diesel fired generator, one (1) tri-ethylene glycol (TEG) dehydration unit with associated reboiler, one (1) line heater, two (2) storage tanks with a vapor recovery unit (VRU), product loadout rack, and related fugitive emissions.

DESCRIPTION OF PROCESS

The following process description was taken from Permit Application R13-3060:

Natural gas will be delivered to the Winters Compressor Station from two (2) gas pipelines. The pipelines, normally operating at 650 psig, will terminate at pig traps inside the facility. Natural gas and pigged liquids will be sent to the inlet separator. Natural gas will continue from the inlet separator to main gas compression (CE-1 – CE-3) and dehydration, then onto a sales pipeline operated by others. The station may also be operated at high pressure (1,000 psid) by bypassing the main gas compression.

Natural gas dehydration will take place through a 60 million standard cubic feet per day (mmscf) TEG dehydration unit. Emissions from the still vent will be controlled through a condenser (BTEX condenser skid). Vapors not condensed through this unit will (along with gases from the flash tank on the dehydration unit) be utilized as fuel by the reboiler.

Natural gas condensate will be delivered to the Winters Compressor Station from two (2) condensate pipelines. These pipelines will have an operating pressure of 200-300 psig. Once in the facility, condensate will pass through a heater (HTR-1) to prevent freezing, then into a pressurized holding vessel, which will act as a three phase separator (gas, condensate, and water) operating near 100 psig. Flashing vapors from the vessel will be recovered by a flash gas compressor (CE-4) and injected back into the gas stream for sales. Condensate in the pressurized holding vessel will be pumped to a liquid pipeline owned by others. The pressurized holding vessel will also receive residual and pigged liquids from the high pressure gas stream.

Fuel gas will be provided to the facility through a small fuel gas skid which is comprised of low pressure regulation and separation.

Low pressure fluids from the fuel gas skid, BTEX condenser skid, water dump from the pressurized holding vessel and flash gas compressor inlet scrubber will be dumped to two (2) 400 bbl atmospheric tanks (S1). The liquids dumped to the tanks are estimated to be less than 2 barrels (bbl)/day condensate and less than 6 bbl/day of water. Emissions from these tanks will be controlled by a vapor recovery unit (VRU) (CE-5), which will discharge vapors back into the pressurized holding vessel. The VRU is estimated to provide 95% control of these vapors.

Liquids in the tanks will be loaded onto trucks for further processing offsite. Truck loading vapors will be controlled using carbon filtration canisters. As well as using two (2) carbon canisters in series, the canisters capacity will be verified prior to each truck loading session.

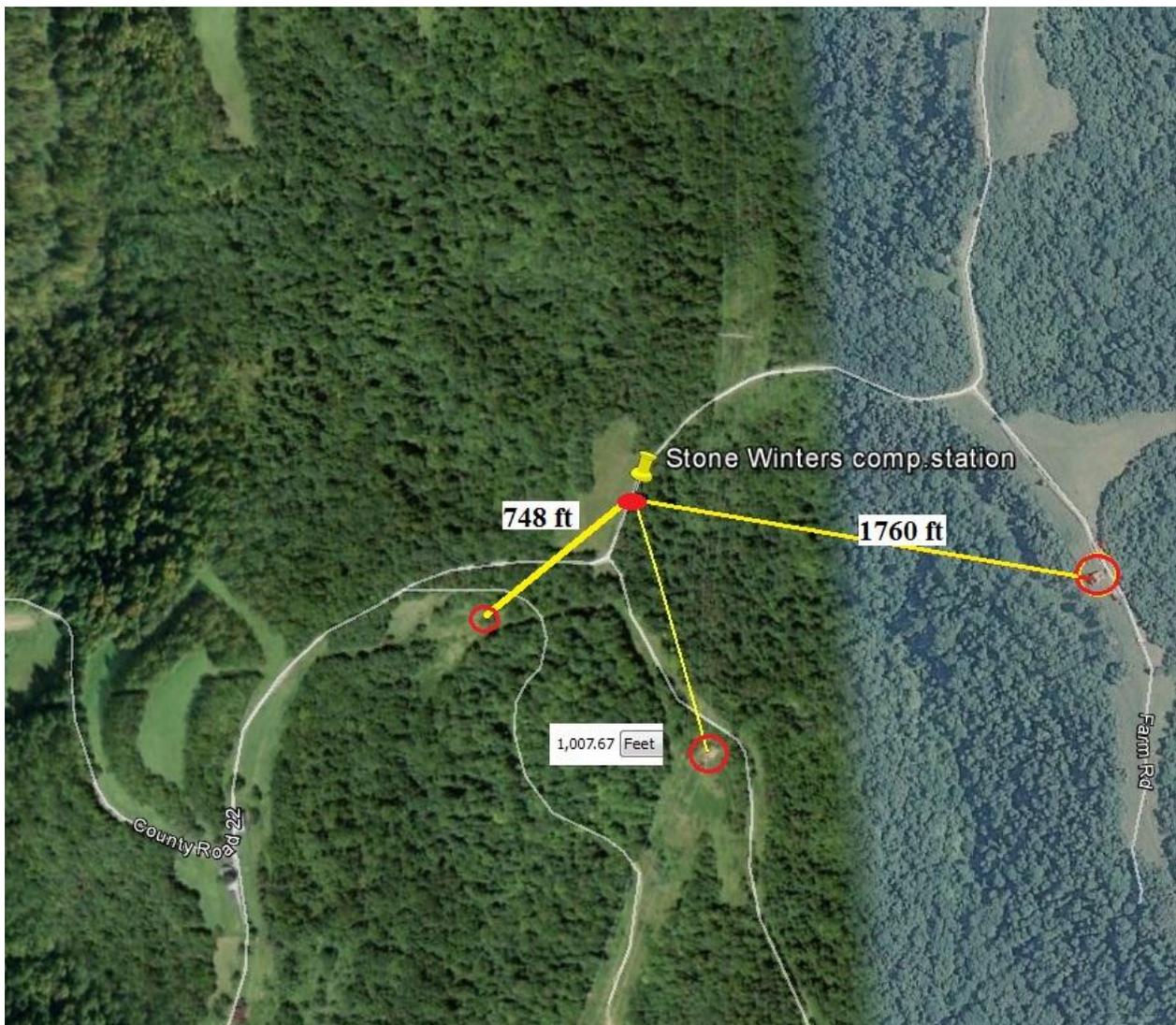
SITE INSPECTION

A site inspection was conducted on April 3, 2013 by Doug Hammell of the DAQ Enforcement Section. According to Mr. Hammell, the site location is appropriate for the proposed facility. The closest residence is approximately 750 feet away.

Latitude: 39.651183
Longitude: -80.811883

Directions as given in the permit application are as follows:

From the intersection of North Street and State Route 2 in New Martinsville, proceed east on North Street for 0.2 miles. This road becomes Doolin Run Road. Continue 0.9 miles to the intersection with County Route 22 (Schupbach Ridge Road). Turn left onto County Route 22 and travel 2.4 miles. The station site is on the left.



ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Emissions associated with this construction application consist of the emissions from three (3) natural gas fired compressor engines (1E-3E), one (1) flash gas compressor (4E), one (1) vapor recovery unit (5E), one (1) natural gas fired generator (6E), one (1) diesel fired generator (7E), one (1) TEG dehydrator reboiler (8E), one (1) TEG dehydrator still vent (8E), two (2) 400 bbl tanks (condensate, produced water) (9E), one (1) product loadout rack (10E), one (1) line heater (11E), and fugitive emissions. Fugitive emissions for the facility are based on calculation methodologies presented in EPA Protocol for Equipment Leak Emission Estimates. The following table indicates which methodology was used in the emissions determination:

| Emission Point ID# | Process Equipment | Calculation Methodology |
|--------------------|---|---|
| 1E-3E | 1,380 hp Caterpillar 3516B Reciprocating Internal Combustion Engine (RICE) w/ Selective Catalytic Reduction (SCR) | Manufacturer's Data, EPA AP-42 Emission Factors |
| 4E | 630 hp Caterpillar 3508LE RICE w/SCR | Manufacturer's Data, EPA AP-42 Emission Factors |
| 5E | 215 hp Caterpillar 3406 RICE w/Non Selective Catalytic Reduction (NSCR) | Manufacturer's Data, EPA AP-42 Emission Factors |
| 6E | 637 HP Caterpillar 3412 Natural Gas Fired Generator w/SCR | Manufacturer's Data, EPA AP-42 Emission Factors |
| 7E | 440 HP Caterpillar C15 Diesel Fired Generator | Manufacturer's Data, EPA AP-42 Emission Factors |
| 8E | 60 mmscfd TEG Dehydrator Still Vent w/ Condenser and Recycle | GRI-GlyCalc 4.0 |
| 8E | 0.75 MMBTU/hr Reboiler | EPA AP-42 Emission Factors |
| 9E | 2 – 400 bbl Condensate/Produced Water Tanks | ProMax Tank Estimation |
| 10E | 16,000 gal/day Product Loadout Rack w/Carbon Canister Control | EPA AP-42 Emission Factors |
| 11E | 0.75 MMBTU/hr Line Heater | EPA AP-42 Emission Factors |

The diesel fired generator (7E) is a USEPA certified stationary compression ignition engine according to 40CFR60 Subpart III. Stone provided the USEPA Certificate of Conformity with this permit application.

The following table indicates the control device efficiencies that are required for this facility:

| Emission Unit | Pollutant | Control Device | Control Efficiency |
|--|----------------------------|--------------------------------|--------------------|
| 1,380 hp Caterpillar 3516 RICE w/ SCR (1E-3E) | Carbon Monoxide | SCR | 90 % |
| | Volatile Organic Compounds | | 80 % |
| | Formaldehyde | | 80 % |
| 630 hp Caterpillar 3508 RICE w/ SCR (4E) | Carbon Monoxide | SCR | 90 % |
| | Volatile Organic Compounds | | 80 % |
| | Formaldehyde | | 80 % |
| 215 hp Caterpillar 3406 RICE w/ NSCR (5E) | Nitrogen Oxides | NSCR | 95 % |
| | Carbon Monoxide | | 95 % |
| | Volatile Organic Compounds | | 80 % |
| | Formaldehyde | | 80 % |
| 637 HP Caterpillar 3412 Natural Gas Fired Generator w/SCR (6E) | Carbon Monoxide | SCR | 20 % |
| | Volatile Organic Compounds | | 50 % |
| 60 mmscfd TEG Dehydrator Still Vent (8E) | Volatile Organic Compounds | Recycled Reboiler w/ Condenser | 95 % |
| | Hazardous Air Pollutants | | 95 % |
| Storage Tanks (9E) | Volatile Organic Compounds | Vapor Recovery Unit | 98 % |
| | Hazardous Air Pollutants | | 98 % |
| Loadout Rack (10E) | Volatile Organic Compounds | Carbon Canister | 95 % |
| | Hazardous Air Pollutants | | 95 % |

The total facility PTE for the Winters Compressor Station is shown in the following table:

| Pollutant | Facility Wide PTE (tons/year) |
|----------------------------|-------------------------------|
| Nitrogen Oxides | 41.46 |
| Carbon Monoxide | 28.08 |
| Volatile Organic Compounds | 24.03 |
| Particulate Matter | 2.49 |
| Sulfur Dioxide | 0.47 |
| Formaldehyde | 4.32 |
| Total HAPs | 6.22 |
| Carbon Dioxide Equivalent | 30,247 |

Maximum detailed controlled point source emissions were calculated by Stone and checked for accuracy by the writer and are summarized in the table on the next page.

Stone Energy Corporation – Winters Compressor Station (R13-3060)

| Emission Point ID# | Source | NO _x | | CO | | VOC | | PM | | SO ₂ | | Formaldehyde | | Total HAPs | | CO ₂ e | |
|--------------------|---------------------------|-----------------|--------------|-------------|--------------|--------------|--------------|-------------|-------------|-----------------|-------------|--------------|-------------|-------------|-------------|-------------------|---------------|
| | | lb/hr | ton/year | lb/hr | ton/year | lb/hr | ton/year | lb/hr | ton/year | lb/hr | ton/year | lb/hr | ton/year | lb/hr | ton/year | lb/hr | ton/year |
| 1E | Compressor Engine #1 | 1.52 | 6.66 | 0.93 | 4.09 | 0.54 | 2.37 | 0.11 | 0.49 | 0.01 | 0.03 | 0.23 | 0.99 | 0.30 | 1.34 | 1,592 | 6,974 |
| 2E | Compressor Engine #2 | 1.52 | 6.66 | 0.93 | 4.09 | 0.54 | 2.37 | 0.11 | 0.49 | 0.01 | 0.03 | 0.23 | 0.99 | 0.30 | 1.34 | 1,592 | 6,974 |
| 3E | Compressor Engine #3 | 1.52 | 6.66 | 0.93 | 4.09 | 0.54 | 2.37 | 0.11 | 0.49 | 0.01 | 0.03 | 0.23 | 0.99 | 0.30 | 1.34 | 1,592 | 6,974 |
| 4E | Flash Gas Compressor | 2.78 | 12.17 | 0.34 | 1.47 | 0.12 | 0.54 | 0.06 | 0.24 | <0.01 | 0.01 | 0.09 | 0.38 | 0.12 | 0.55 | 809 | 3,542 |
| 5E | Vapor Recovery Compressor | 0.38 | 1.65 | 0.38 | 1.65 | 0.03 | 0.15 | 0.03 | 0.15 | <0.01 | <0.01 | 0.03 | 0.11 | 0.04 | 0.19 | 282 | 1,237 |
| 6E | Primary Generator | 1.40 | 6.15 | 2.77 | 12.12 | 0.31 | 1.35 | 0.05 | 0.23 | <0.01 | 0.01 | 0.20 | 0.86 | 0.27 | 1.18 | 768 | 3,366 |
| 7E | Backup Generator | 3.59 | 0.90 | 0.25 | 0.06 | 0.03 | 0.01 | 1.40 | 0.35 | 1.31 | 0.35 | 0.01 | <0.01 | 0.03 | <0.01 | 1,088 | 272 |
| 8E | Dehydrator Still Vent | 0.00 | 0.00 | 0.00 | 0.00 | 2.16 | 9.43 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.28 | 0 | 0 |
| 8E | Dehydrator Reboiler | 0.07 | 0.30 | 0.06 | 0.25 | <0.01 | 0.02 | <0.01 | 0.03 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 81 | 353 |
| 9E | Condensate/Water Tanks | 0.00 | 0.00 | 0.00 | 0.00 | 0.35 | 1.52 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 |
| 10E | Condensate Loadout | 0.00 | 0.00 | 0.00 | 0.00 | 23.90 | 0.62 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 |
| 11E | Line Heater | 0.07 | 0.31 | 0.06 | 0.26 | <0.01 | 0.02 | <0.01 | 0.02 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 85 | 371 |
| Fugitive | Equipment Leaks | 0.00 | 0.00 | 0.00 | 0.00 | 0.62 | 2.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 156 |
| Fugitive | Pigging and Blowdowns | 0.00 | 0.00 | 0.00 | 0.00 | NA | 0.56 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 28 |
| Total | Total Facility PTE | 12.85 | 41.46 | 6.65 | 28.08 | 29.14 | 24.03 | 1.87 | 2.49 | 1.34 | 0.47 | 1.02 | 4.32 | 1.43 | 6.22 | 7889 | 30,247 |

REGULATORY APPLICABILITY

Unless otherwise stated WVDEP DAQ did not determine whether the permittee is subject to an area source air toxics standard requiring Generally Achievable Control Technology (GACT) promulgated after January 1, 2007 pursuant to 40 CFR 63, including the area source air toxics provisions of 40 CFR 63, Subpart ZZZZ and HH.

The following rules apply to the facility:

45CSR2 (Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers)

The purpose of 45CSR2 is to establish emission limitations for smoke and particulate matter which are discharged from fuel burning units. 45CSR2 states that any fuel burning unit that has a heat input under ten (10) million B.T.U.'s per hour is exempt from sections 4 (weight emission standard), 5 (control of fugitive particulate matter), 6 (registration), 8 (testing, monitoring, recordkeeping, reporting) and 9 (startups, shutdowns, malfunctions). However, failure to attain acceptable air quality in parts of some urban areas may require the mandatory control of these sources at a later date.

The individual heat input of the proposed reboiler (8E) is below 10 MMBTU/hr. Therefore, this unit is exempt from the aforementioned sections of 45CSR2.

Stone would also be subject to the opacity requirements in 45CSR2, which is 10% opacity based on a six minute block average.

45CSR10 (To Prevent and Control Air Pollution from the Emissions of Sulfur Oxides)

The purpose of 45CSR10 is to establish emission limitations for sulfur dioxide which are discharged from fuel burning units. 45CSR10 states that any fuel burning unit that has a heat input under ten (10) million B.T.U.'s per hour is exempt from sections 3 (weight emission standard), 6 (registration), 7 (permits), and 8 (testing, monitoring, recordkeeping, reporting). However, failure to attain acceptable air quality in parts of some urban areas may require the mandatory control of these sources at a later date.

The individual heat input of the proposed reboiler (8E) is below 10 MMBTU/hr. Therefore, this unit is exempt from the aforementioned sections of 45CSR10.

45CSR13 (Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation)

45CSR13 applies to this source due to the fact that Stone exceeds the regulatory emission threshold for criteria pollutants of 6 lb/hr and 10 ton/year, and they are also subject to a substantive requirement of an emission control rule promulgated by the Secretary (40CFR60 Subparts JJJJ and OOOO).

Stone paid the appropriate application fee and published the required legal advertisement for a construction permit application.

45CSR16 (Standards of Performance for New Stationary Sources Pursuant to 40 CFR Part 60)

45CSR16 applies to this source by reference of 40CFR60, Subparts JJJJ and OOOO. These requirements are discussed under that rule below.

45CSR22 (Air Quality Management Fee Program)

Stone is not subject to 45CSR30. The Winters Compressor Station is subject to 40CFR60 Subparts JJJJ and OOOO, however they are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided they are not required to obtain a permit for a reason other than their status as an area source.

Stone is required to pay the appropriate annual fees and keep their Certificate to Operate current.

40CFR60 Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE))

The 440 hp diesel fired generator (7E) is a USEPA certified stationary compression ignition engine according to 40CFR60 Subpart IIII. Stone provided the USEPA Certificate of Conformity with this permit application. Therefore, Stone will not be required to conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or three (3) years, whichever comes first, to demonstrate compliance.

40CFR60 Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI ICE))

40CFR60 Subpart JJJJ establishes emission standards for applicable SI ICE.

The proposed 1,380 hp Caterpillar 3516B (1E-3E) will be subject to the following emission limits: NO_x – 1.0 g/hp-hr (3.04 lb/hr); CO – 2.0 g/hp-hr (6.08 lb/hr); and VOC – 0.7 g/hp-hr (2.12 lb/hr). Based on the manufacturer's specifications for these engines, the emission standards will be met.

The proposed 1,380 hp Caterpillar 3516B (1E-3E) are not certified by the manufacturer to meet the emission standards listed in 40CFR60 Subpart JJJJ. Therefore, Stone will be required to conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or three (3) years, whichever comes first, to demonstrate compliance.

The proposed 630 hp natural gas fired flash gas compressor (4E) was manufactured prior to the applicability date of this rule, therefore it is not subject to any applicable requirements under 40CFR60 Subpart JJJJ.

The proposed 215 hp vapor recovery unit compressor (5E) was manufactured prior to the applicability date of this rule, therefore it is not subject to any applicable requirements under 40CFR60 Subpart JJJJ.

The proposed 637 hp Caterpillar 3412 (6E) natural gas fired generator will be subject to the following emission limits: NO_x – 1.0 g/hp-hr (1.40 lb/hr); CO – 2.0 g/hp-hr (2.81 lb/hr); and VOC – 0.7 g/hp-hr (0.98 lb/hr). Based on the manufacturer's specifications for these engines, the emission standards will be met.

The proposed 637 hp Caterpillar 3412 (6E) is not certified by the manufacturer to meet the emission standards listed in 40CFR60 Subpart JJJJ. Therefore, Stone will be required to conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or three (3) years, whichever comes first, to demonstrate compliance.

40CFR60 Subpart OOOO (Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution)

EPA published in the Federal Register new source performance standards (NSPS) and air toxics rules for the oil and gas sector on August 16, 2012. 40CFR60 Subpart OOOO establishes emission standards and compliance schedules for the control of volatile organic compounds (VOC) and sulfur dioxide (SO₂) emissions from affected facilities that commence construction, modification or reconstruction after August 23, 2011. The following affected sources which commence construction, modification or reconstruction after August 23, 2011 are subject to the applicable provisions of this subpart:

- a. Each gas well affected facility, which is a single natural gas well.

There are no gas wells at this facility. Therefore, all requirements regarding gas well affected facilities under 40 CFR 60 Subpart OOOO would not apply.

- b. Each centrifugal compressor affected facility, which is a single centrifugal compressor using wet seals that is located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment. For the purposes of this subpart, your centrifugal compressor is considered to have commenced construction on the date the compressor is installed (excluding relocation) at the facility. A centrifugal compressor located at a well site, or an adjacent well site and servicing more than one well site, is not an affected facility under this subpart.

There are no centrifugal compressors at the Winters Compressor Station. Therefore, all requirements regarding centrifugal compressors under 40 CFR 60 Subpart OOOO would not apply.

- c. Each reciprocating compressor affected facility, which is a single reciprocating compressor located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment. For the purposes of this subpart, your reciprocating compressor is considered to have commenced construction on the date the compressor is installed (excluding relocation) at the facility. A

reciprocating compressor located at a well site, or an adjacent well site and servicing more than one well site, is not an affected facility under this subpart.

There are reciprocating internal combustion engines located at the Winters Compressor Station that were constructed after August 23, 2011. Therefore, the requirements regarding reciprocating compressors under 40 CFR 60 Subpart OOOO would apply. Stone would be required to perform the following:

- Replace the reciprocating compressor rod packing at least every 26,000 hours of operation or 36 months.
- Demonstrate initial compliance by continuously monitoring the number of hours of operation or track the number of months since the last rod packing replacement.
- Submit the appropriate start up notifications.
- Submit the initial annual report for the reciprocating compressors.
- Maintain records of hours of operation since last rod packing replacement, records of the date and time of each rod packing replacement, and records of deviations in cases where the reciprocating compressor was not operated in compliance.

d. Pneumatic Controllers

- Each pneumatic controller affected facility, which is a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 scfh which commenced construction after August 23, 2011, and is located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment and not located at a natural gas processing plant.
- Each pneumatic controller affected facility, which is a single continuous bleed natural gas-driven pneumatic controller which commenced construction after August 23, 2011, and is located at a natural gas processing plant.

There will be applicable pneumatic controllers at this facility. Therefore, the requirements regarding pneumatic controllers under 40 CFR 60 Subpart OOOO would apply. Stone would be required to perform the following:

- *Each pneumatic controller located between the wellhead and a natural gas processing plant must have a bleed rate less than or equal to 6 standard cubic feet per hour (scfh).*

- *Each pneumatic controller must be tagged with the month and year of installation, reconstruction, or modification, and identification information that allows traceability to the records for that controller.*
 - *Submit the appropriate start up notifications.*
 - *Submit the applicable annual reports for pneumatic controllers.*
 - *Maintain records of the date, location and manufacturer specifications for each pneumatic controller, records of the demonstration that the used of pneumatic controllers with a natural gas bleed rate greater than 6 scfh are required and the reasons why, records of the manufacturer's specifications indicating that the controller is designed such that the natural gas bleed rate is less than or equal to 6 scfh, records of deviations in cases where the pneumatic controllers was not operated in compliance.*
- e. Each storage vessel affected facility, which is a single storage vessel, located in the oil and natural gas production segment, natural gas processing segment or natural gas transmission and storage segment.

40CFR60 Subpart OOOO defines a storage vessel as a unit that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provides structural support and is designed to contain an accumulation of liquids or other materials. The following are not considered storage vessels:

- Vessels that are skid-mounted or permanently attached to something that is mobile (such as trucks, railcars, barges or ships), and are intended to be located at a site for less than 180 consecutive days. If the source does not keep or are not able to produce records, as required by §60.5420(c)(5)(iv), showing that the vessel has been located at a site for less than 180 consecutive days, the vessel described herein is considered to be a storage vessel since the original vessel was first located at the site.
- Process vessels such as surge control vessels, bottoms receivers or knockout vessels.
- Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere.

This rule requires that the permittee determine the VOC emission rate for each storage vessel affected facility utilizing a generally accepted model or calculation methodology within 30 days of startup, and minimize emissions to the extent practicable during the 30 day period using good engineering practices. For each storage vessel affected facility that emits more than 6 tpy of VOC, the permittee must reduce VOC emissions by 95% or greater within 60 days of startup. The compliance date for applicable storage vessels is October 15, 2013.

The storage vessels located at the Winters Compressor Station will be controlled by a VRU which will reduce the potential to emit to less than 6 tpy of VOC. Therefore, Stone is not required by this section to install additional controls.

- f. The group of all equipment, except compressors, within a process unit is an affected facility.
- Addition or replacement of equipment for the purpose of process improvement that is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.
 - Equipment associated with a compressor station, dehydration unit, sweetening unit, underground storage vessel, field gas gathering system, or liquefied natural gas unit is covered by §§60.5400, 60.5401, 60.5402, 60.5421 and 60.5422 of this subpart if it is located at an onshore natural gas processing plant. Equipment not located at the onshore natural gas processing plant site is exempt from the provisions of §§60.5400, 60.5401, 60.5402, 60.5421 and 60.5422 of this subpart.
 - The equipment within a process unit of an affected facility located at onshore natural gas processing plants and described in paragraph (f) of this section are exempt from this subpart if they are subject to and controlled according to subparts VVa, GGG or GGGa of this part.

The Winters Compressor Station is not a natural gas processing plant. Therefore, Leak Detection and Repair (LDAR) requirements for onshore natural gas processing plants would not apply.

- g. Sweetening units located at onshore natural gas processing plants that process natural gas produced from either onshore or offshore wells.
- Each sweetening unit that processes natural gas is an affected facility; and
 - Each sweetening unit that processes natural gas followed by a sulfur recovery unit is an affected facility.
 - Facilities that have a design capacity less than 2 long tons per day (LT/D) of hydrogen sulfide (H₂S) in the acid gas (expressed as sulfur) are required to comply with recordkeeping and reporting requirements specified in §60.5423(c) but are not required to comply with §§60.5405 through 60.5407 and paragraphs 60.5410(g) and 60.5415(g) of this subpart.
 - Sweetening facilities producing acid gas that is completely reinjected into oil-or-gas-bearing geologic strata or that is otherwise not released to the atmosphere are not subject to §§60.5405 through 60.5407, 60.5410(g), 60.5415(g), and 60.5423 of this subpart.

There are no sweetening units at the Winters Compressor Station. Therefore, all requirements regarding sweetening units under 40 CFR 60 Subpart OOOO would not apply.

The following rules do not apply to the facility:

45CSR30 (Requirements for Operating Permits)

Stone is not subject to 45CSR30. The Winters Compressor Station is subject to 40CFR60 Subparts JJJJ and OOOO, however they are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided they are not required to obtain a permit for a reason other than their status as an area source.

40CFR60 Subpart Kb (Standards of Performance for VOC Liquid Storage Vessels)

40CFR60 Subpart Kb does not apply to storage vessels with a capacity less than 75 cubic meters. The largest tanks that Stone has proposed to install are 63.60 cubic meters each. Therefore, Stone would not be subject to this rule.

40CFR60 Subpart KKK (Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants)

40CFR60 Subpart KKK applies to onshore natural gas processing plants that commenced construction after January 20, 1984, and on or Before August 23, 2011. The Winters Compressor Station is not a natural gas processing facility, therefore, Stone is not subject to this rule.

45CSR14 (Permits for Construction and Major Modification of Major Stationary Sources of Air Pollutants)

45CSR19 (Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution which Cause or Contribute to Nonattainment)

The Winters Compressor Station is located in Wetzel County, which is an attainment county for all criteria pollutants, therefore the Winters Compressor Station is not applicable to 45CSR19.

As shown in the table below, Stone is not subject to 45CSR14 or 45CSR19 review.

| Pollutant | PSD (45CSR14) Threshold (tpy) | NANSR (45CSR19) Threshold (tpy) | Winters PTE (tpy) | 45CSR14 or 45CSR19 Review Required? |
|------------------------------------|--------------------------------------|--|--------------------------|--|
| Carbon Monoxide | 250 | NA | 28.08 | No |
| Nitrogen Oxides | 250 | NA | 41.46 | No |
| Sulfur Dioxide | 250 | NA | 0.47 | No |
| Particulate Matter 2.5 | 250 | NA | 2.49 | No |
| Ozone (VOC) | 250 | NA | 24.03 | No |
| Greenhouse Gas (CO ₂ e) | 100,000 | NA | 30,247 | No |

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

There will be small amounts of various non-criteria regulated pollutants emitted from the combustion of natural gas. However, due to the concentrations emitted, detailed toxicological information is not included in this evaluation.

AIR QUALITY IMPACT ANALYSIS

Modeling was not required of this source due to the fact that the facility is not subject to 45CSR14 (Permits for Construction and Major Modification of Major Stationary Sources of Air Pollutants) as seen in the table listed in the Regulatory Discussion Section.

SOURCE AGGREGATION

“Building, structure, facility, or installation” is defined as all the pollutant emitting activities which belong to the same industrial grouping, are located on one or more contiguous and adjacent properties, and are under the control of the same person.

The Winters Compressor Station is located in Wetzel County and will be operated by Stone.

1. The Winters Compressor Station will operate under SIC code 4922 (Pipeline Transportation of Natural Gas). There are other compressor stations operated by Stone that share the same two-digit major SIC code of 49 for natural gas transmission. Therefore, the Winters Compressor Station does share the same SIC code as other Stone compressor stations.
2. “Contiguous or Adjacent” determinations are made on a case by case basis. These determinations are proximity based, and it is important to focus on this and whether or not it meets the common sense notion of a plant. The terms “contiguous” or “adjacent” are not defined by USEPA. Contiguous has a dictionary definition of being in actual contact; touching along a boundary or at a point. Adjacent has a dictionary definition of not distant; nearby; having a common endpoint or border.

There are no Stone properties in question that are considered to be on contiguous or adjacent property with the Winters Compressor Station. The closest Stone well site is approximately 0.9 miles from this site. The land between these sites is not owned or managed by Stone. Operations separated by these distances do not meet the common sense notion of a plant. Therefore, the properties in question are not considered to be on contiguous or adjacent property.

3. Common control. Nearby well pads and the Winters Compressor Station are owned and operated by the same corporate entity and will share common work forces periodically.

Because the facilities are not considered to be on contiguous or adjacent properties, the emissions from the Winters Compressor Station should not be aggregated with other facilities in determining major source or PSD status.

MONITORING OF OPERATIONS

Stone will be required to perform the following monitoring, recordkeeping, and reporting:

1. Monitor and record quantity of natural gas consumed for all engines and combustion sources.
2. Monitor and record quantity of condensate produced by the BTEX Eliminator.
3. Monitor and report any malfunctions associated with the BTEX Eliminator.
4. Maintain records of the natural gas throughput to the glycol dehydration unit.
5. Maintain records of testing conducted in accordance with the permit. Said records shall be maintained on-site or in a readily accessible off-site location
6. Maintain a record of all potential to emit (PTE) HAP calculations for the entire facility. These records shall include the natural gas compressor engines and ancillary equipment.
7. Monitor all applicable requirements of 40CFR60 Subparts JJJJ and OOOO.
8. Maintain the corresponding records specified by the on-going monitoring requirements of and testing requirements of the permit.
9. Maintain records of the visible emission opacity tests conducted per the permit.
10. The records shall be maintained on site or in a readily available off-site location maintained by Stone for a period of five (5) years.

RECOMMENDATION TO DIRECTOR

The information provided in the permit application indicates that Stone meets all the requirements of applicable regulations. Therefore, impact on the surrounding area should be minimized and it is recommended that the Winters Compressor Station should be granted a 45CSR13 construction permit for their facility.

Jerry Williams, P.E.
Engineer

Date