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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	R13-3154
Plant ID No.:	103-00077
Applicant:	Stone Energy Corporation
Facility Name:	Mills – Wetzel Pad 3
Location:	near Jacksonburg, Wetzel County
NAICS Code:	211111
Application Type:	Construction
Received Date:	November 4, 2013
Engineer Assigned:	Jill Harris, P.E.
Fee Amount:	$2,000.00
Date Received:	November 5, 2013
Complete Date:	December 2, 2013
Due Date:	March 2, 2014
Applicant Ad Date	November 27, 2013
Newspaper:	*The Wetzel Chronicle*
UTM's:	Easting: 528.100 km Northing: 4,373.419 km Zone: 17
Description:	Construction of a natural gas well pad. The well pad will consist of two (2) generator engines (25 hp), one (1) truck loading station (2,300,000 gallons/yr), eight (8) line heaters (0.75 MMBtu/hr), two (2) produced water tanks (400 bbl), four (4) condensate tanks (400 bbl) and two (2) vapor combustor units (20 MCFD).

DESCRIPTION OF PROCESS

The following process description was taken from Permit Application R13-3154:

Natural gas and produced fluids (condensate and water) will be received from 8 wells on this location and passed through heaters to avoid ice formation during pressure drops. These materials then pass through three-way separators where entrained gas, condensate and water are separated. The gas will be routed directly to a gathering pipeline owned by others, which will operate near 300 psi.

The raw condensate will be routed to an un-heated flash separator, dropping the pressure to approximately 50 psig. Flash gas from the separator will be burned in a vapor combustion

unit (VCU). [It is important to note that the lease agreement for this property does not allow installation of a compressor. Hence, this flash gas cannot be captured and re-injected to the gas stream].

Condensate will accumulate in four 400 bbl tanks, pending transportation by others to a processing facility for separation into individual products. Flash, working and breathing losses from these tanks will be routed to the VCU noted above. Vapors generated during truck loading of condensate will be routed to a second VCU where, in turn, they will be destroyed. The produced water will be accumulated in two 400 bbl tanks pending transportation by others to an approved disposal facility. Flash gas vapors from these tanks will be routed to the VCU used to control vapors from the condensate tanks. As VOC vapors from the water tanks are comprised solely of flash gases generated during the drop to atmospheric pressure, there will be no measurable VOC vapors associated with truck loading operations of the produced water.

Two small, gas-fired generators will also be present to provide electric service for facility instrumentation and controllers.

All natural gas fired equipment use natural gas received at the station as a fuel.

SOURCE AGGREGATION

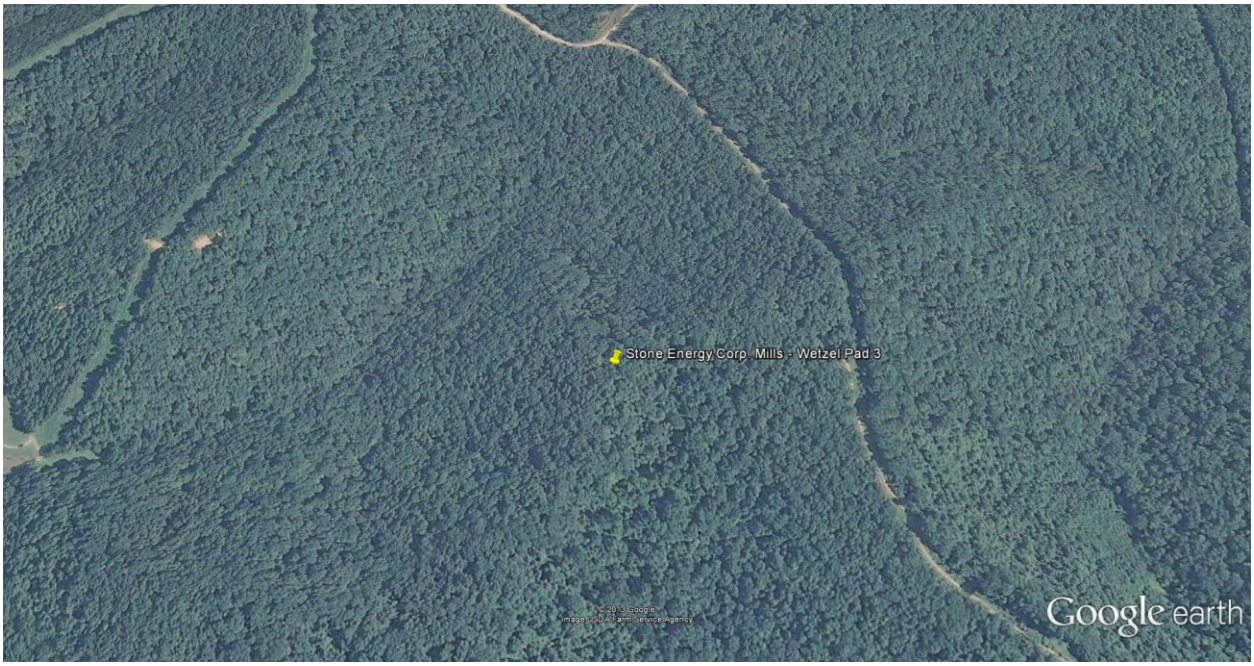
The proposed Stone Energy facility will receive and manage raw natural gas and associated produced fluids from the wells at the site. After separation of the liquids, the gas will be injected into a gathering line owned by others (Eureka Hunter Pipeline, LLC) for transportation to its Carbide Compressor Station.

The well pad, wells and the equipment associated with this application are owned and operated by the same corporate entity, are co-located and will share work force. Additionally, the Stone Energy well pad and the Mills Wetzel Well Pad 3 Station share the same SIC group. Thus, emission sources at this contiguous property should be aggregated. All emission sources associated with the well pad production equipment and this new station are included in this permit application for operation under a single permit. There will be no gas from other well pads routed to this facility and no gas or liquids from this facility will be routed to any other Stone Energy facility. Hence, no other Stone Energy well pads or other facilities in the area should be aggregated with this new facility.

The receiving Carbide Compressor Station, while under the same general SIC Code, has completely separate ownership and there is no sharing of staff. In addition, the compressor station is approximately 2.1 miles from the site of this proposed facility. Thus, not all of the aggregation criteria are met for the aggregation of the proposed facility (well pad) and the Carbide Compressor Station. Emissions from the Mills Wetzel Pad 3 Station should not be aggregated with the Carbide Compressor Station.

SITE INSPECTION

Doug Hammell, from DAQ's Enforcement Section, conducted a site inspection of the site on November 23, 2013. The site is a remote site and drilling operations were taking place at the time of inspection. The site is acceptable for the proposed operation. The nearest building/residence is approximately 0.5 miles. Photos of the site are available in the out to file, R13-3154.



ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Emissions associated with this construction application consist of the combustion emissions from four (4) natural gas fired generator engines (1E, 2E, 3EA & 3EB), eight line heaters (8) line heaters (HTR-1), two (2) produced water tanks (T01-T02), four (4) condensate storage tank (T01-T04), product loading (S4), 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:

Table 1 : Calculation Methodology

Emission Point ID#	Process Equipment	Calculation Methodology
3EA & 3EB	Power Solutions 25 hp Engines	Manufacturer's Data (NOx, CO, VOC) and AP-42 Emission Factors, Table 3.2-3 (7/00) Emissions factors assume 70% NOx and 30% VOCs
4E	Truck Loading	AP-42 Emission Factors, Chapter 5.2.2.1.1, Loading Losses (6/08)
5E	Line Heaters	AP-42 Emission Factors, Table 1.4-1, 1.4-2,

Emission Point ID#	Process Equipment	Calculation Methodology
		1.4-3 (7/98)
6E	Vapor Combustor #1	AP-42 Emission Factors, Table 13.5-1 (9/91) & Table 1.4-2 and Table 1.4-3, 40 CFR 98 Table C-1, C-2
-	Produced Water Tanks	ProMax®3.2 Computer Simulation Model
-	Condensate Tanks	ProMax®3.2 Computer Simulation Model
7E	Vapor Combustor #2	AP-42 Emission Factors, Table 13.5-1 (9/91) & Table 1.4-2 and Table 1.4-3, 40 CFR 98 Table C-1, C-2

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

Table 2: Control Devices

Emission Unit	Pollutant	Control Device	Control Efficiency
S4 Condensate Truck Loadout	Volatile Organic Compounds Hazardous Air Pollutants	VCU-1	98%
T01-T06 Condensate & Produced Water Tanks	Volatile Organic Compounds Hazardous Air Pollutants	VCU-2	98%

Table 3: Hourly PTE of Criteria Pollutants and GHG

Source ID & Description	NOx	CO	PM[(1)]	VOC	SOx	CO2e
HTR-1 Heaters (8)	0.4876	0.4096	0.0371	0.0268	0.0029	589
3EA & 3EB Generator Engines	0.3950	2.7624	0.0001	0.1694	0.0001	52.43
Vapor Combustor VCU-1	0.50	2.74	0.0317	1.78	-	866.14
Vapor Combustor VCU-2	0.01	0.04	0.0002	3.25	-	12.63
Fugitive Emissions	-	-	-	1.32	-	22.292
Hourly PTE (lb/hr)	1.3926	5.952	0.0691	6.5462	0.003	1542.492

Table 4: Annual PTE of Criteria Pollutants and GHG

Source ID & Description	NOx	CO	PM	VOC	SOx	CO2e
HTR-1 Heaters (8)	2.136	1.794	0.162	0.117	0.013	2578
3EA & 3EB Generator Engines	1.73	12.0994	0.0006	0.7420	0.0006	229.6498
Vapor Combustor VCU-1	0.95	5.19	0.06	7.8020	-	1640.08
Vapor Combustor VCU-2	0.02	0.09	0.001	7.19[(1)]	-	34.43
Fugitive Emissions	-	-	-	5.78	-	102
Annual PTE (tpy)	4.836	19.1734	0.2236	21.631	0.0136	4584.1598

[(1)] Uncaptured VOC emissions from truck loading reported in this number.

Table 5: Annual Emissions of Hazardous Air Pollutants (HAP)

Source ID & Description	Acrolein	Acetaldehyde	Formaldehyde	Benzene	Toluene	Methanol	Xylene	Total HAPs
HTR-1 Heaters (8)	-	-	0.002	-	-	-	-	0.002
3EA & 3EB Generator Engines	0.0002	0.0002	0.014	-	-	0.0002	-	0.0146
Vapor Combustor VCU-1	-	-	-	-	-	-	-	-
Vapor Combustor VCU-2	-	-	-	-	-	-	-	-
Fugitive Emissions	-	-	-	-	-	-	-	-
Annual PTE (tpy)	0.0002	0.0002	0.016	-	-	0.0002	-	0.0166

REGULATORY APPLICABILITY

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 each of the proposed line heaters (HTR-1) is below 10 MMBTU/hr (0.75 MMBtu/hr proposed heaters). 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.

45CSR6 (Control of Air Pollution from Combustion of Refuse)

This rule establishes emission standards for particulate matter and requirements for particulate matter and requirements for activities involving incineration of refuse which are not subject to, or are exempted from regulation under a federal counterpart for specific combustion sources. This rule also prohibits open burning and sets forth the registration, permitting, reporting, testing, emergency, natural disaster and exemption provisions for activities involving the combustion of refuse and land clearing debris.

The facility has proposed two (2) vapor combustors for controlling the working/breathing/flashing emissions from the condensate/produced water storage tanks. The vapor combustors must meet the requirements for the emission standards set forth in section 4.1 of this rule, were the allowable particulate matter emission rate to be discharged is determined below.

Emissions (lb/hr) = F x Incinerator Capacity (tons/hr)
Where, the factor, F, is as indicated in Table I below:
Table I: Factor, F, for Determining Maximum Allowable Particulate Emissions.

Incinerator Capacity	Factor F
A. Less than 15,000 lbs/hr	5.43
B. 15,000 lbs/hr or greater	2.72

Emissions to the incinerator (VCU-1) are 159.15 lbs/hr maximum or 0.0796 tons/hr.

Allowable Particulate Emissions (lb/hr) = 5.43 x 0.0796 tons/hr = 0.43 lb/hr

The hourly particulate matter emission rate from combustor (VCU-1) is 0.03 lb/hr.

Emissions to the incinerator (VCU-2) are approximately 16.02 tpy (captured) or 0.002 ton/hr.

Allowable Particulate Emissions (lb/hr) = 5.43 x 0.002 = 0.01 lb/hr.

The hourly particulate matter emissions rate from the combustor (VCU-2) is 0.0002 lb/hr.

The facility's proposed combustors will meet the emission requirements of this rule. The facility will demonstrate compliance by maintaining and operating the combustors properly.

The vapor combustors must meet the visible emissions requirements of this rule, which limits the combustor to 20% opacity during operation per section 4.3 of this rule. Since particulate matter is expected to be emitted at a negligible rate, the vapor combustors should meet the requirements of this section. The permittee will be required to operate the vapor combustors according to manufacturer specifications in order to maintain a smokeless operation. The permittee will also be required to conduct a Method 22 opacity check upon startup and monthly checks of the vapor combustors and Method 9 opacity checks upon request of the Director.

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

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 each of the proposed line heaters (HTR-1) is below 10 MMBTU/hr (0.75 MMBtu/hr proposed heaters). 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 OOOO – gas wells).

Stone paid the appropriate application fee and published the required legal advertisement for a construction permit application. The facility published the legal ad in the Wetzel

Chronicle on November 27, 2013. The agency will publish a legal ad in the Wetzel Chronicle for a 30 day public comment period.

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 facility is subject to 40CFR60 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 JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines)

The facility is proposing to install four generator engines at the site. The generator engines are Power Solutions, Inc, 25 hp engines. They are proposing construction in 2014 and they were manufactured after July 1, 2007. Since a manufacture date was not provided in the application, the manufacture date will be assumed to be 2013.

The (2) two 25 hp engines are subject to the emission standard requirements in §60.4231(a) (§60.4233(a)). The table below show the applicable emission standard for the 25 hp, 1.6L (1,600 ml or 1,600 cubic centimeters (cc)) engine.

Table 6: Emission Standards

If engine displacement is…	And manufacturing dates are…	The engine must meet emission standards and related requirements for nonhandheld engines under…
(4) at or above 225 cc	January 1, 2011 or later	40 CFR part 1054
Engine displacement class	HC + NOx (g/KW-hr)	CO (g/KW-hr)
Class II …	8.0	610

Table 7: Manufacturer Emission Data for PSI Engine (25 hp)

Emission Unit ID	HC + NOx (g/KW-hr)	CO (g/KW-hr)
3A & 3B	6.89	33.7

The engines (3A & 3B) will meet the emission standards set forth in section 40 CFR part 1054.

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 (SO_2) 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.

The gas wells that currently exist at this facility were drilled principally for the production of natural gas and were done so after August 23, 2011. Therefore, these wells would be considered affected facilities under this subpart. The compliance date for these hydraulically fractured wells is October 15, 2012. Stone is required under §60.5410 to submit an initial notification, initial annual report, maintain a log of records for each well completion, and maintain records of location and method of compliance. §60.5420 requires Stone demonstrate continuous compliance by submitting reports and maintaining records for each completion operation.

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 this facility. 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 two (2) reciprocating internal combustion engines located at this facility. Since this is a well site, the reciprocating internal combustion engines are not subject to the requirements of this subpart.

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.

There are two (2) produced water tanks and four (4) produced water tanks located at the facility. The tanks are controlled by a vapor combustor unit. The vapor combustor will have a manufacturer's guarantee control efficiency from the manufacturer of 98%. Since the facility is proposing to install a vapor combustor to control VOC emissions from the storage vessels and obtain a federally enforceable limit in their permit, the facility will not be required to reduce emissions by 95% or greater with 60 days of startup.

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 facility 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 (H_2S) 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 this facility. Therefore, all requirements regarding sweetening units under 40 CFR 60 Subpart OOOO would not apply.

40CFR63 Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines)

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

The facility is a minor source of hazardous air pollutants (HAPS < 10 tpy of an individual HAP and < 25 tpy of aggregate HAPs). The facility is therefore considered an area source (§63.6585(c)). The engines are considered new stationary RICE (§63.6590(a)(2)(iii)).

Stationary RICE subject to Regulations under 40 CFR Part 60 must meet the requirements of those subparts that apply (40 CFR 60 Subpart JJJJ, for spark ignition engines) if the engine is a new stationary RICE located at an area source (§63.6590(c)(1)). No further requirements apply for such engines under this part.

The following rules do not apply.

45CSR30 (Requirements for Operating Permits)

Stone is not subject to 45CSR30. This facility is subject to 40CFR60 Subparts 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 (19,812.9 gallons). The largest tanks that Stone has proposed to install are 400 bbl (16,800 gallons) 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. This facility 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)

This facility is located in Wetzel County, which is an attainment county for all criteria pollutants, therefore this facility is not applicable to 45CSR19.

As stated in the Source Aggregation section above, Stone is not subject to 45CSR14 or 45CSR19 review.

Table 4: PSD and NANSR Threshold

Pollutant	PSD (45CSR14) Threshold (tpy)	NANSR (45CSR19) Threshold (tpy)	Mills – Wetzel Pad 3 (tpy)	45CSR14 or 45CSR19 Review Required
Carbon Monoxide	250	N/A (attainment)	19.17	No
Nitrogen Oxides	250	N/A (attainment)	4.83	No
Sulfur Dioxides	250	N/A (attainment)	0.01	No
Particulate Matter2.5	250	N/A (attainment)	0.22	No
Ozone (VOC)	250	N/A (attainment)	21.68	No
Greenhouse Gas (CO2e)	100,000	N/A (attainment)	4,585	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.

MONITORING OF OPERATIONS

Stone will be required to perform the following monitoring:

1. Monitor and record quantity of natural gas consumed for all engines and combustion sources.
2. Monitor all applicable requirements of 40CFR60 Subparts JJJJ and OOOO.

Stone will be required to perform the following recordkeeping:

1. Maintain records of the amount of natural gas consumed and hours of operation for all engines and combustion sources.
2. 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
3. Maintain the corresponding records specified by the on-going monitoring requirements of and testing requirements of the permit.
4. Maintain records of the visible emission opacity tests conducted per the permit.
5. 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.
6. Maintain records of all applicable requirements of 40CFR60 Subparts JJJJ and OOOO.
7. Maintain records of the enclosed flare or vapor combustor design evaluation.
8. 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 Wetzel County location should be granted a 45CSR13 construction permit for their facility.

Jill Harris, P.E.
Engineer

Date