

ESCAMBIA OPERATING COMPANY

FLOMATON/FANNY CHURCH OIL AND GAS PRODUCTION FACILITY

FACILITY No: 502-0005

FLOMATON, ESCAMBIA COUNTY, AL

MAJOR SOURCE OPERATING PERMIT

FOURTH TITLE V RENEWAL

DRAFT-APRIL 9,2020

TABLE OF CONTENTS

STATEMENT OF BASIS 4

NOTABLE CHANGES 4

FACILITY DESCRIPTION 5

FACILITY-WIDE REQUIREMENTS 6

 STATE REGULATIONS..... 6

 ADEM ADMIN CODE R. 335-3-4-.01, “VISIBLE EMISSION” FOR CONTROL OF PARTICULATE EMISSIONS 6

 ADEM ADMIN CODE R. 335-3-5-.03, “PETROLEUM PRODUCTION” FOR CONTROL OF SULFUR COMPOUND EMISSIONS ... 6

 ADEM ADMIN CODE R. 335-3-14-.04, “PREVENTION OF SIGNIFICANT DETERIORATION (PSD) PERMITTING” 7

 ADEM ADMIN CODE R. 335-3-14-.06, “DETERMINATIONS FOR MAJOR SOURCES IN ACCORDANCE WITH CLEAN AIR ACT SECTION 112(G)” 7

 ADEM ADMIN CODE R. 335-3-16-.03, “MAJOR SOURCE OPERATING PERMITS” 7

 FEDERAL REGULATIONS 7

 NEW SOURCE PERFORMANCE STANDARDS (NSPS)..... 7

 40 CFR PART 60 SUBPART A, “GENERAL PROVISIONS” 7

 40 CFR PART 60 SUBPART VVA, “STANDARDS OF PERFORMANCE FOR EQUIPMENT LEAKS OF VOC IN THE SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY” 8

 40 CFR PART 60 SUBPART OOOO, “STANDARDS OF PERFORMANCE FOR CRUDE OIL AND NATURAL GAS PRODUCTION, TRANSMISSION AND DISTRIBUTION” [NSPS QUAD O] 8

 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) 8

 40 CFR 63 SUBPART A, “GENERAL PROVISIONS” 8

 40 CFR 63 SUBPART HH, “NESHAP FROM OIL AND NATURAL GAS PRODUCTION FACILITIES” 8

 40 CFR 64, “COMPLIANCE ASSURANCE MONITORING” (CAM) 8

 FACILITY-WIDE EMISSIONS 9

FLARE REQUIREMENTS 10

 STATE REGULATIONS..... 10

 ADEM ADMIN CODE R. 335-3-4-.01, “VISIBLE EMISSION” FOR CONTROL OF PARTICULATE EMISSIONS 10

 ADEM ADMIN CODE R. 335-3-4-.03, “FUEL BURNING EQUIPMENT” FOR CONTROL OF PARTICULATE EMISSIONS 11

 ADEM ADMIN CODE R. 335-3-5-.01, “FUEL COMBUSTION” FOR CONTROL OF SULFUR COMPOUND EMISSIONS..... 11

 ADEM ADMIN CODE R. 335-3-5-.03, “PETROLEUM PRODUCTION” FOR CONTROL OF SULFUR COMPOUND EMISSIONS . 11

 ADEM ADMIN CODE R. 335-3-14-.04, “PREVENTION OF SIGNIFICANT DETERIORATION (PSD) PERMITTING” 12

 FEDERAL REGULATIONS 12

 40 CFR 64, “COMPLIANCE ASSURANCE MONITORING” (CAM) 12

 FLARE EMISSIONS 13

FLOMATON/FANNY CHURCH OIL AND GAS PRODUCTION FACILITY

FACILITY No: 502-0005

STATEMENT OF BASIS

COMPRESSOR REQUIREMENTS	14
STATE REGULATIONS.....	14
ADEM ADMIN CODE R. 335-3-6, "CONTROL OF ORGANIC EMISSIONS"	14
FEDERAL REGULATIONS	14
NEW SOURCE PERFORMANCE STANDARDS (NSPS).....	14
40 CFR PART 60 SUBPART A, "GENERAL PROVISIONS"	14
40 CFR PART 60 SUBPART OOOO, "STANDARDS OF PERFORMANCE FOR CRUDE OIL AND NATURAL GAS PRODUCTION, TRANSMISSION AND DISTRIBUTION"	14
40 CFR 64, "COMPLIANCE ASSURANCE MONITORING" (CAM)	15
COMPRESSOR EMISSIONS	15
STORAGE VESSEL REQUIREMENTS.....	16
STATE REGULATIONS.....	16
ADEM ADMIN CODE R. 335-3-5-.03, "PETROLEUM PRODUCTION" FOR CONTROL OF SULFUR COMPOUND EMISSIONS .	16
FEDERAL REGULATIONS	16
NEW SOURCE PERFORMANCE STANDARDS (NSPS).....	16
40 CFR PART 60 SUBPART A, "GENERAL PROVISIONS"	16
40 CFR PART 60 SUBPART OOOO, "STANDARDS OF PERFORMANCE FOR CRUDE OIL AND NATURAL GAS PRODUCTION, TRANSMISSION AND DISTRIBUTION"	17
40 CFR 64, "COMPLIANCE ASSURANCE MONITORING" (CAM)	17
STORAGE VESSEL EMISSIONS.....	17
RECOMMENDATIONS	18
APPENDIX A: DRAFT PROVISOS	19

STATEMENT OF BASIS

This proposed Title V Major Source Operating Permit (MSOP) renewal is issued under the provisions of ADEM Admin. Code R. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans, and other documents attached hereto or on file with the Air Division of Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

Escambia Operating Company (EOC), LLC (a subsidiary of Grizzly Operating, LLC) was issued its third MSOP renewal on June 9, 2015 with an expiration date of June 8, 2020 for the Flomaton/Fanny Church Oil and Gas Production Facility (Flomaton Plant) located in Flomaton, Alabama. Per ADEM Rule 335-3-16-.12(2), an application for permit renewal shall be submitted at least six (6) months, but not more than eighteen (18) months, before the date of expiration of the permit. The initial renewal application was received on February 12, 2020. The proposed MSOP will expire on June 8, 2025.

NOTABLE CHANGES

During this renewal the following changes occurred:

- To simplify and streamline permit requirements, several modifications were made to the structure of the permit
- In a letter dated June 5, 2017, the Permittee notified the Department that the Flomaton Plant would no longer be continuously manned by plant personnel throughout the day. The Permittee requested the use of an existing flare camera located at the company's Big Escambia Creek (BEC) Plant to monitor the flare at the Flomaton Plant. The flare camera was already trained on the Flomaton flare.

The Permittee requested the use of the flare camera as a backup to monitor the presence of a spark or flame at the flare tip and to determine the presence or absence of visible emissions from the flare since the plant was no longer be manned. No permitting action was required since the Permittee planned to continue to monitor the flare primarily using a thermocouple to determine the presence of spark or flame and because the flare camera would only be used as backup. The existing permit did not include requirements to allow the use of a flare camera to determine a spark or flame at a flare tip. Also, since the Permittee explained in the letter that they only planned to use the flare camera to monitor the flare for the presence of visible emissions and not to determine opacity from the flare, no permitting action was required. The current permit allows use of a flare camera only for the purpose of determining the presence of emissions, not opacity. On June 26, 2017, the facility was notified by the Department via email that no permitting action was required for this change.

- Modifications were made to the flare's opacity monitoring section located in *Appendix B: Opacity Monitoring for Process Flare* of the permit. Per its permit, the Permittee can use EPA Method 22 of 40 CFR 60, Subpart A to determine smoke emissions from the flare. Method 22 does not require the Permittee to be certified to conduct opacity readings to determine compliance with the standards. However, this section is being revised to provide clarity on what is required from the Permittee when it elects to use Method 22 instead of Method 9 of 40 CFR 60, Subpart A to demonstrate compliance with the opacity standards.

Since the issuance of the last renewal, no permitting action and no new applicable regulations have been promulgated that would affect the facility's current permit requirements.

Permit Shield

The Flomaton Plant has requested for a permit shield to be applied to their fourth Title V renewal. The permit shield was included in the addendum to the permit application dated April 6, 2020.

FACILITY DESCRIPTION

The Flomaton Plant is a sour natural gas production facility which collects full well streams (consisting of condensate, sour natural gas, and produced water) from the Fanny Church Oil Field which is located six (6) miles south of the Flomaton Plant. The plant is equipped with the following equipment:

- Process Flare (EU HP/LP Flare)
- Electric Driven Reciprocating Compressor (EU COMP1)
- 4,000 Barrel Produced Water Storage Tank (EU T6000)
- 280 Barrel Gun Barrel Storage Tank (EU T6100)
- 100 Barrel Slop Oil Storage Tank (EU T6200)
- 4,200 Gallon Miscellaneous Storage Tank storing Lube Oil, Methanol (MeOH) and anti-freeze (EU MISCTK)
- Pressurized Condensate Storage Tank
- Produced water loading operation (PWLOAD)
- Slop Oil, Lube Oil, MeOH, anti-freeze Loading Operations (EU MISCLoad)

The full well stream enters the Flomaton Plant where it is separated into three separate streams via the bulk separator. The sour gas stream, with entrained liquids, is not processed at the Flomaton Plant. That stream is compressed and transported via pipeline, for processing, at the Big Escambia Operating Plant (BEC Plant) which is also owned and operated by Escambia Operating Company. The condensate stream from the separator is stored in the pressurized tank until it is transported for treatment and stabilization at the BEC Plant via a separate pipeline. The produced water stream is routed to the gun barrel tank where impurities are skimmed and sent to a slop oil tank. The remaining water is sent to a water storage tank until it is loaded and trucked offsite for disposal. Approximately 100 barrels per year of slop oil is loaded from the slop oil tank for disposal.

FACILITY-WIDE REQUIREMENTS

Applicable regulations for the Flomaton Plant are found in the following table:

EMISSION POINT	DESCRIPTION	POLLUTANT	EMISSION LIMIT	REGULATIONS
SOURCES:				
Petroleum Production Facility that handles gas or refinery gas containing 0.10 grains of H ₂ S/Scf		H ₂ S	Burn gas with 0.10 grains or more of H ₂ S/Scf	Rule 335-3-5-.03(1)
			Burn gas to maintain the offsite concentration at 20 ppbv or less	Rule 335-3-5-.03(2)
All Stationary Sources		Opacity	No more than one 6-minute average. > 20%; Except during one 6 min avg in a 60-minute period, opacity shall not exceed > 40%	Rule 335-3-4-.01(1)(a), (b)
All Stationary Sources		SO ₂	1,000 Tons per 12 months	Rule 335-3-14-.09 [Anti-PSD Limits]

The following sections explain state and federal regulations which may or may not be applicable to the Flomaton Plant.

STATE REGULATIONS

APPLICABILITY

ADEM Admin Code r. 335-3-4-.01, "Visible Emission" for Control of Particulate Emissions

This regulation controls particulate matter (PM) emissions by restricting visible emissions from stationary sources. This regulation would be applicable to the facility flare since it is the only emission source. The specific monitoring and recordkeeping requirements shall be discussed in the flare section.

APPLICABILITY

ADEM Admin Code r. 335-3-5-.03, "Petroleum Production" for Control of Sulfur Compound Emissions

This regulation applies to the control of sulfur compound emissions from each petroleum production facility that handles gas or refinery gas that contains 0.10 grains of hydrogen sulfide (H₂S) per standard cubic foot (Scf) (~160 ppmv) or more. The Flomaton Plant handles sour gas with a H₂S concentration of 160 ppmv or more; therefore, the facility is subject to the applicable requirements of this regulation.

APPLICABILITY

ADEM Admin Code r. 335-3-14-.04, "Prevention of Significant Deterioration (PSD) Permitting"

The facility accepted a PSD limit to avoid undergoing a PSD review when the natural gas processing plant and all its associated equipment was removed from the plant. A netting analysis was conducted in July 2014 and the sulfur dioxide (SO₂) emissions from the facility was limited based on the facility flaring for no more than 10% of the year. Emissions would include emissions from normal operations, upset events, maintenance, and plant startup/shutdown. Since the flare is the primary source of SO₂ emissions from the plant, the limit will be addressed in the flare section of this document.

APPLICABILITY

ADEM Admin Code r. 335-3-14-.06, "Determinations for Major Sources in Accordance with Clean Air Act Section 112(g)"

This regulation applies to major sources of hazardous air pollutants (HAPs) constructed after March 27, 1998. Since this facility is not a major source of HAPs (emitting 10 TPY or more of a single HAP or 25 TPY or more of a combination of HAPs), a 112(g) case by case MACT review would not be necessary.

APPLICABILITY

ADEM Admin Code r. 335-3-16-.03, "Major Source Operating Permits"

The Flomaton Plant has been deemed a major source of criteria pollutants for SO₂ emissions since emissions would exceed the 100 tons per year (TPY) threshold for criteria pollutants. The facility wide HAPs emissions are not expected to exceed the 10 TPY threshold for a single HAPs or the 25 TPY threshold for a combination of HAPs; therefore, the facility is not a major source for HAPs emissions. Compliance with this regulation shall be met by maintaining records of emissions from stationary sources and conducting monitoring and testing as required by the permit.

FEDERAL REGULATIONS

NEW SOURCE PERFORMANCE STANDARDS (NSPS)

APPLICABILITY

40 CFR Part 60 Subpart A, "General Provisions"

Provided that affected sources located at the plant are subject to one of the applicable subparts found under this part, the facility shall comply with this subpart as specified in the applicable subpart. Table 3 of 40 CFR 60 Subpart OOOO [NSPS Quad O] covers the applicable requirements of this subpart that apply to affected sources under NSPS Quad O [§60.5425]

APPLICABILITY

40 CFR Part 60 Subpart VVa, "Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry"

This subpart is only applicable by reference in 40 CFR 60 Subpart OOOO. Since §60.5400 does not apply to equipment leaks from this plant, there are no requirements under this subpart.

APPLICABILITY

40 CFR Part 60 Subpart OOOO, "Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution" [NSPS Quad O]

This regulation was promulgated by the United States Environmental Protection Agency (EPA) on April 17, 2012 and it contains SO₂ and volatile organic compound (VOC) requirements for natural gas production wells and natural gas processing plants constructed, reconstructed, or modified after August 23, 2011 and on or before September 18, 2015 [§60.5360]. Affected sources under this subpart include requirements for storage vessels and reciprocating compressors [§60.5365]. The applicable requirements under this subpart will be discussed in the appropriate section of this document.

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP)

APPLICABILITY

40 CFR 63 SUBPART A, "General Provisions"

Provided that affected sources located at the plant are subject to one of the applicable subparts found under this part, the facility shall comply with this subpart as specified in the applicable subpart.

APPLICABILITY

40 CFR 63 SUBPART HH, "NESHAP from Oil and Natural Gas Production Facilities"

This subpart is applicable to area sources of HAPS that process, upgrade or store hydrocarbon liquids [§63.670(a)(1) and (2)]. The Flomaton Plant is an area source of HAPs and it also stores condensate; however, the plant is not equipped with an affected facility for this subpart which includes a tri-ethylene glycol (TEG) dehydration units; therefore, this plant will not be subject to the requirements under this subpart [§63.670(b)(2)].

APPLICABILITY

40 CFR 64, "Compliance Assurance Monitoring" (CAM)

This subpart is applicable to an emission source provided the source meets all of the following criteria: it is subject to an emission limit or standard, it uses a control device to achieve compliance with the emissions limit or standard, and it has pre-controlled emissions from a regulated air pollutants that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major

FLOMATON/FANNY CHURCH OIL AND GAS PRODUCTION FACILITY

FACILITY NO: 502-0005

STATEMENT OF BASIS

source [40 CFR §64.2(a)]. Applicability to this subpart will be discussed in the individual sections for each applicable emission source.

FACILITY-WIDE EMISSIONS

The source of emissions from the plant are from the EU HP/LP Flare and fugitive emissions. Vapors from the pressurized condensate tank’s pressure relief valves, compressor seal gas, produced water tank, truck loading and vapors from full well stream flaring during upset events are routed to the flare for combustion. Uncontrolled emissions from the MeOH (miscellaneous) storage tank are also included in the table below.

EMISSION TYPE	POLLUTANT	POTENTIAL EMISSIONS TONS PER YEAR (TPY)						
		MISC.TANK/ LOADING/TANK EMISSIONS	LP/HP FLARE (NORMAL)	LP/HP FLARE (UPSET)	FUGITIVE EMISSIONS	COMP1	TOTAL EMISSIONS	PERMIT LIMIT
CRITERIA POLLUTANT EMISSIONS	PM _{2.5/10}	-	0.002	0.53	-		0.532	-
	SO ₂	-	0.00	999.40	-		999.40	1,000
	NO _x	-	0.029	4.82	-		4.85	-
	CO	-	0.025	41.29	-		41.32	-
	VOC	1.06	0.002	18.03	11.35	4.0	34.43	-
	Total HAPs	0.00	0.006	0.126	-		1.58	-
GHG EMISSIONS	CO _{2e}	-	434.5	11,939.27	21.29		12,395.06	-

Actual emissions from the Flomaton Plant were obtained from 2018 Air Emissions reported to the Department. According to data provided in the emissions report, no methanol loading and no upset flaring events occurred during this reporting year.

EMISSION TYPE	POLLUTANT	ACTUAL EMISSIONS TONS PER YEAR (TPY)					
		MISC.TANK AND LOADING EMISSIONS	LP/HP FLARE (NORMAL)	LP/HP FLARE (UPSET)	FUGITIVE EMISSIONS	TOTAL EMISSIONS	PERMIT LIMIT
CRITERIA POLLUTANT EMISSIONS	PM _{2.5/10}	0.00	0.00	0.00	-	0.00	-
	SO ₂	0.00	2.07	0.00	-	2.07	1,000
	NO _x	0.00	0.06	0.00	-	0.06	-
	CO	0.00	0.16	0.00	-	0.16	-
	VOC	0.00	0.02	0.00	1.35	1.37	-
	Total HAPs	0.00	0.00	0.00	0.181	0.181	-

FLARE REQUIREMENTS

The Flomaton Plant consists of one Low Pressure/High Pressure flare. The process flare is used to combust both high pressure and low pressure gas.

EMISSION POINT	DESCRIPTION	POLLUTANT	EMISSION LIMIT	REGULATIONS
LP/HP Flare; w/ closed vent system		Opacity	No more than one 6-minute average > 20%; Except during one 6 min avg in a 60-minute period, opacity shall not exceed > 40%	Rule 335-3-4-.01(1)(a), (b)
		H ₂ S	Burn gas with 0.10 grains or more of H ₂ S/Scf	Rule 335-3-5-.03(1)
			Burn gas to maintain the offsite concentration at 20 ppbv or less	Rule 335-3-5-.03(2)
		SO ₂	1,000 tons per 12 months	Rule 335-3-14-.09

The following section explains state regulations which may or may not be applicable to the facility flare. Other than CAM regulations, there are no other applicable federal regulations for flares located at an oil and gas production facility.

STATE REGULATIONS

APPLICABILITY

ADEM Admin Code r. 335-3-4-.01, "Visible Emission" for Control of Particulate Emissions

EMISSION STANDARDS

ADEM 335-3-4-.01(a) states that no person shall emit to the atmosphere particulate of an opacity of greater than twenty percent (20%) over a six (6) minute period. **ADEM 335-3-4-.01(b)** states that for one six-minute period during any sixty-minute period a person may discharge into the atmosphere from any source of emissions, particulate of an opacity not greater than that designated as forty percent (40%) opacity.

The proposed LP/HP flare is subject to these regulations. Compliance with these regulations is met by conducting daily visual inspections of the flare for the presence or absence of visible emissions. Provided that visible emissions in excess of the opacity standards or smoke emissions are observed from the flare at any time, either a visible emissions observation or a visual determination shall be conducted on the flare.

COMPLIANCE AND PERFORMANCE TEST METHODS AND PROCEDURES

Method 9 or Method 22 found in 40 CFR part 60, appendix A would be used to demonstrate compliance with the opacity standards.

EMISSIONS MONITORING

When Method 22 is used to determine the duration of smoke emissions from the flare, the method must be conducted by an individual who is familiar with the procedures. When Method 9 is used to determine opacity, the method must be conducted by an individual who is certified to use this procedure. Visual inspections, visible emission observations, or visual determinations of smoke emissions shall all be conducted during daylight hours.

RECORDKEEPING AND REPORTING REQUIREMENTS

A record of each occurrence when daily visual inspections of the flare occurs and each visible emission observation or each visual determination shall be recorded and maintained. A deviation shall be reported to the Department within 48 hours or 2 working days when a visible emission event occurs.

Applicability

ADEM Admin Code r. 335-3-4-.03, "Fuel Burning Equipment" for Control of Particulate Emissions

This regulation would not apply to the flare. Flares are not considered fuel burning equipment since they do not combust fuel for the propose of generating energy.

APPLICABILITY

ADEM Admin Code r. 335-3-5-.01, "Fuel Combustion" for Control of Sulfur Compound Emissions

This regulation would not apply to the flare. Flares are not considered fuel burning equipment since they do not combust fuel for the propose of generating energy.

APPLICABILITY

ADEM Admin Code r. 335-3-5-.03, "Petroleum Production" for Control of Sulfur Compound Emissions

The Flomaton Plant handles sour gas with a concentration of 0.10 grains/Scf or more of H₂S (~160 ppmv); therefore, the facility is subject to the applicable requirements of this regulation.

EMISSION STANDARDS

ADEM Admin. Code R. 335-3-5-.03(2) requires that all process gas streams containing greater than 0.10 grains/Scf of H₂S shall be burned such that the offsite H₂S concentration is 20 ppbv or less, as averaged over a 30-minute period. The flare is used to comply with the requirement to burn sour gas containing 160 ppmv or more of H₂S. Vapors from the tanks, compressor seals and the flaring of full gas well streams are routed to the flare for combustion. The H₂S feedrate to the flare is not allowed to exceed 500 lb/hr. The feedrate is used as an indicator to show that compliance with the offsite concentration is being met.

ADEM Admin. Code R. 335-3-5-.03(3) requires that SO₂ emissions from a facility that is designed to dispose of or process natural gas containing 0.10 grains/Scf of H₂S or more does not exceed the allowable limit

based on the available sulfur coming into the facility. The Flomaton Plant disposes of sour natural gas meeting this criterion. Provided that the available sulfur disposed of does not exceed 5 Long tons per day (LTD) (~467.7 pounds per hour; 2,048.5 TPY) for a Category I County (which includes Escambia County), the SO₂ emissions from the facility would be unlimited. However, the facility has elected to limit their potential flare SO₂ emissions (including emissions from normal operations, upset events, maintenance, and shutdown/startups) to 1,000 TPY.

COMPLIANCE AND PERFORMANCE TEST METHODS AND PROCEDURES

The H₂S concentration of any gas stream that can be flared must be determined no less than annually using chromatographic analysis procedures found in ASTM E-260, stain tube procedures found in GPA 2377-86 or those provided by the stain tube manufacturer, or other methods approved by the Department.

EMISSION MONITORING

The flare must be in operation anytime vapors can be routed to it for combustion. The presence of a spark or flame at the flare tip is an indicator that vapors are being combusted. A daily visual inspection of the flare is required to check for a spark or flame at the flare tip.

RECORDKEEPING AND REPORTING REQUIREMENTS

Records of the daily inspection, volume of gas flared, H₂S concentration of the flared gas, and flare emissions shall be recorded and maintained. Provided that a spark or flame was not present when sour gas was routed to the flare, a deviation report must be submitted to the Department within 2 working day or 48 hours.

APPLICABILITY

ADEM Admin Code r. 335-3-14-.04, "Prevention of Significant Deterioration (PSD) Permitting"

The facility accepted a 1,000 ton per year PSD limit for SO₂ emissions to avoid undergoing a PSD review when the natural gas processing plant and all its associated equipment was removed from the plant. The facility is required to maintain a record of flare emissions to demonstrate compliance with the permit limit. At any time that the allowable limit is exceeded, a deviation report shall be submitted to the Department within two working days or 48 hours.

APPLICABILITY

ADEM Admin Code r. 335-3-16-.03, "Major Source Operating Permits"

The flare is located at a facility that is a major source under this subpart for criteria pollutants. The facility is required to maintain records of flare emissions, monitor and sample the well streams to determine the volatile organic compound (VOC) and Btu content of the streams routed to the flare, and to submit a semi-annual periodic monitoring report (PMR) to the Department.

FEDERAL REGULATIONS

APPLICABILITY

40 CFR 64, "Compliance Assurance Monitoring" (CAM)

The process flare is utilized as a control device to burn gas containing greater than 0.10 grains of H₂S/Scf. The facility's potential pre-control emissions of H₂S could potentially be greater than 100 tons per year.

The requirement to burn off gases is considered a work practice standard and not an emission limitation. As defined in the CAM regulation, an emission limitation may be expressed in the form of a work practice, process parameter or other form of specific design. Thus, CAM is applicable to the flare and shall be utilized to assure compliance with the requirement to burn sour gases. The parameter chosen to indicate that sour gases are being burned shall be the presence of a flame or spark at the flare tip when sour gases can be vented to it.

EMISSION STANDARDS

Burn all process gas containing greater than 0.10 grains of H₂S/Scf in the process flare during emergencies, plant startup, shutdown, or any time a gas stream (other than the pilot) can be routed to the flare.

COMPLIANCE AND PERFORMANCE TEST METHODS AND PROCEDURES

Unless the flare is equipped with a continuous spark flame igniter or with a continuous burning pilot light that is monitored with a thermocouple or an equivalent device, a visual inspection of the flare shall be conducted.

EMISSION MONITORING

The visual inspection of the flare (if required) shall be conducted daily during daylight hours to detect the presence or absence of a spark or flame at the flare tip.

RECORDKEEPING AND REPORTING REQUIREMENTS

A record of the date, time, observer, and results of each visual inspection of the flare shall be maintained. A record of the time, date and results of each calibration shall be maintained if a flame igniter or a thermocouple is being used. Each occurrence when a spark or flame is not maintained at the flare tip shall be reported as a deviation. Provided that there are more than six deviations that occur in a semi-annual reporting period when a spark or flame is not present at the flare tip, a Quality Improvement Plan (QIP) shall be developed and implemented.

Periodic monitoring reports (PMR) are required to be submitted to the Department on a semi-annual basis and they are required to include deviations reported during the semi-annual reporting period.

FLARE EMISSIONS

Expected/potential emissions from the flare are summarized in the table below. Flare emissions includes vapors from the pressurized condensate tank’s pressure relief valves, compressor seal gas, produced water tank, truck loading and vapors from full well stream flaring during upset events.

FLARE EMISSIONS						
TPY						
PM _{2.5/10}	SO ₂	NO _x	CO	VOC	Total HAPs	GHG
0.068	1,000	4.85	41.32	18.03	0.127	12,373.77

COMPRESSOR REQUIREMENTS

The following section explains state and federal regulations which may or may not be applicable to the reciprocating compressor.

Permitted Operating Schedule: **24 Hours/Day x 365 Days/Year = 8,760 Hours/Year**

Emission Limitations:

EMISSION POINT	DESCRIPTION	POLLUTANT	EMISSION LIMIT	REGULATIONS
Electric Driven Reciprocating Compressor (COMP1)		VOC	Work Practice	§60.5365(c) [NSPS Quad O]

STATE REGULATIONS

APPLICABILITY

ADEM Admin Code r. 335-3-6, "Control of Organic Emissions"

ADEM Admin Code r. 335-3-6-.09 applies to compressors; however, sources with a potential volatile organic compound (VOC) emission rate of less than 100 TPY are not subject to this regulation.

FEDERAL REGULATIONS

NEW SOURCE PERFORMANCE STANDARDS (NSPS)

APPLICABILITY

40 CFR Part 60 Subpart A, "General Provisions"

Table 3 of 40 CFR 60 Subpart OOOO [NSPS Quad O] covers the applicable sections of this subpart which will apply to affected facilities under NSPS Quad OOOO [§60.5425].

APPLICABILITY

40 CFR Part 60 Subpart OOOO, "Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution"

Reciprocating compressors are affected facilities under the requirements of this subpart.

EMISSION STANDARDS

The compressor at the Flomaton Plant is a reciprocating compressor which is subject to the standards found in §60.5385(a)(2). The plant elected to comply with the requirement to replace the compressor rod packing prior to 36 months from the date of the most recent rod packing replacement.

COMPLIANCE AND PERFORMANCE TEST METHODS AND PROCEDURES

There are no notification requirements or testing requirements for reciprocating compressor [§60.5420(a)(1)]. The records specified in §60.7(f) and §60.5420 (c)(3) shall be maintained either onsite or at the nearest local field office for at least five years.

EMISSION MONITORING

Monitoring is in the form of maintaining records of the number of months since the last rod packing replacement and maintaining records of each replacement of the rod packing.

RECORDKEEPING AND REPORTING REQUIREMENTS

The plant demonstrated initial compliance for this compressor by recording the number of months of operation since initial startup of the compressor and by submitting the first annual report containing the information specified in §60.5420 (b)(1) and (4). The initial annual report covering the period from October 15, 2015 through October 14, 2016 was submitted to the Department within 90 days after the end of the initial compliance period [§60.5410, 60.5415(c)(2), 60.5420(b)].

Continuous compliance for the compressor is met by continuously recording the months of operation since the last rod packing replacement, by replacing the compressor rod packing 36 months from the date of the most recent rod packing, and by submitting subsequent annual reports to the Department by January 13 [§60.5410(c), §60.5415(c)(1), (3)]. Report submittals can coincide with Title V reports if all the required content is included and if the schedule does not extend the reporting period [§60.541(c)(2), §60.5420(b)].

APPLICABILITY

40 CFR 64, "Compliance Assurance Monitoring" (CAM)

CAM would not be applicable for the compressor since the three applicable criteria were not met for this unit.

COMPRESSOR EMISSIONS

The plant elected to route vapors from the compressor's seals to the flare for combustion; therefore, expected emissions from the compressor should be zero. Potential uncontrolled VOC emissions from compressor seals are 4 TPY.

STORAGE VESSEL REQUIREMENTS

The following section explains state and federal regulations which may or may not be applicable to storage vessels located at the Flomaton Plant:

The Flomaton Plant is equipped with the following storage vessels/tanks:

- 16,800 Gallon (4,000 Barrel) Produced Water Storage Tank (EU T6000)
- 11,760 Gallon (280 Barrel) Gun Barrel Storage Tank (EU T6100)
- 4,200 Gallon (100 Barrels) Slop Oil Storage Tank (EU T6200)
- 4,200 Gallon Miscellaneous Storage Tank storing Lube oil, Methanol (MeOH) and anti-freeze (EU MISCTK)
- Pressurized Condensate Storage Tank

STATE REGULATIONS

APPLICABILITY

ADEM Admin Code r. 335-3-5-.03, "Petroleum Production" for Control of Sulfur Compound Emissions

This regulation applies to the control of sulfur compound emissions from each petroleum production facility that handles gas or refinery gas that contains more than 0.10 grains of hydrogen sulfide (H₂S) per standard cubic foot (Scf) (160 ppmv). The Flomaton Plant handles sour gas with a concentration of 0.10 grains/Scf or more of H₂S; therefore, the facility is subject to the applicable requirements of this regulation. Vapors from the condensate, produced water, gun barrel, and slop oil tanks could have an H₂S concentration of 160 ppmv or more which requires that those vapors are burned. The flare is used to combust vapors from these tanks; therefore, compliance with the requirement to burn the tank vapors will be met by complying with the requirements for the flare.

FEDERAL REGULATIONS

NEW SOURCE PERFORMANCE STANDARDS (NSPS)

APPLICABILITY

40 CFR Part 60 Subpart A, "General Provisions"

Provided that affected sources located at the plant are subject to one of the applicable subparts found under this part, the facility shall comply with this subpart as specified in the applicable subpart.

APPLICABILITY

40 CFR Part 60 Subpart Kb, "Standards of Performance for Storage Vessels from Petroleum Liquids"

This subpart applies to volatile organic liquid (VOL) storage vessels (including petroleum liquid storage vessels) for which construction, reconstruction, or modification commenced after July 23, 1984.

The pressurized condensate storage tank is not subject to this subpart because pressure vessels designed to operate in excess of 204.9 kilopascals (kPa) and without emissions to atmosphere are exempt from any requirements under this subpart [§60.110b(d)(2)]. This tank will be pressurized at 50 pounds per square inch (psig) (345 kPa) and there will be no emissions vented to atmosphere since the pressure relief valves for the tank are routed to the flare for combustion.

The gun barrel tank, slop oil tank, and the miscellaneous storage tank are not subject to the requirements of this subpart because they do not meet the capacity and vapor pressure requirements for applicability under this subpart [§60.110b(a), §60.112b].

The produced water storage tank does not contain a VOL as defined in §60.111b; therefore, this tank is not subject to this subpart.

APPLICABILITY

40 CFR Part 60 Subpart OOOO, "Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution"

Storage vessels located at an oil and gas production segment are affected sources under this subpart if their potential for VOC emissions is equal to or greater than 6 TPY for a single storage vessel [§60.5365(e)].

The 400-barrel produced water storage tank would meet the definition of a storage vessel under this subpart as defined in §60.5430. This tank was constructed after April 15, 2014; however, it is not subject to the requirements of this subpart since its potential volatile organic compound (VOC) emissions are not equal to or greater than 6 TPY. The calculated uncontrolled VOC emissions from the storage tank is expected to be 4.35 TPY. Even though the tank would not be subject to this subpart, the vapors from the tanks will still be controlled by the flare since there is a requirement to burn gas containing more than 160 ppmv H₂S.

The pressurized condensate storage tank is exempt under this subpart because it is a pressure vessel that is designed to operate in excess of 204.9 kPa (29.72 psia) and there will be no emissions to atmosphere since pressure relief valves are routed to the flare [§60.5430]. The miscellaneous storage tank is not subject to the requirements of this subpart since it does not meet the definition of a storage vessels defined under §60.5430.

There are no applicable requirements under this subpart for storage vessels located at the Flomaton Plant.

APPLICABILITY

40 CFR 64, "Compliance Assurance Monitoring" (CAM)

CAM would not be applicable to the storage vessels since the three applicable criteria were not met for these units.

STORAGE VESSEL EMISSIONS

Vapors from the miscellaneous storage tank are not controlled by the flare; however, vapors from all other storage tanks are routed through a closed vent system to the flare for combustion. Tanks emissions will only include emissions from the miscellaneous storage tank which would be 0.33 TPY.

RECOMMENDATIONS

Based on the information provided in the permit application and supplemental records submitted, I recommend that the Department issue the fourth renewal for Major Source Operating Permit No.: 502-0005 for the Flomaton/Fanny Church Oil and Gas Production Facility.

Provided that the terms and conditions in the permit are adhered to, Escambia Operating Company should be able to comply with all applicable State and Federal Air Pollution regulations. Pending the 30-day public comment period and 45-day EPA review period, I recommend issuance of this renewal permit.

Harlotte M. Bolden-Wright
Industrial Minerals Section
Energy Branch
Air Division

April 9, 2020

Draft Date

APPENDIX A: DRAFT PROVISOS