



MAJOR SOURCE OPERATING PERMIT

Permittee: **Sklar Exploration Company, LLC**
Facility Name: **Castleberry Oil & Gas Field, Area No. 5**
Facility No.: 103-0039
Location: Callaway Road, Brooklyn, AL

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§ 22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§ 22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted thereunder, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

*Pursuant to the **Clean Air Act of 1990**, all conditions of this permit are federally enforceable by EPA, the Alabama Department of Environmental Management, and citizens in general. Those provisions which are not required under the **Clean Air Act of 1990** are considered to be state permit provisions and are not federally enforceable by EPA and citizens in general. Those provisions are contained in separate sections of this permit.*

Issuance Date: *January 5, 2018*
Modification Date: *DRAFT*
Effective Date: *DRAFT*
Expiration Date: *January 4, 2023*

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<p>1. <u>Transfer</u></p> <p>This permit is not transferable, whether by operation of law or otherwise, either from one location to another, from one piece of equipment to another, or from one person to another, except as provided in Rule 335-3-16-.13(1)(a)5.</p>	Rule 335-3-16-.02(6)
<p>2. <u>Renewals</u></p> <p>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 this permit. The source for which this permit is issued shall lose its right to operate upon the expiration of this permit unless a timely and complete renewal application has been submitted within the time constraints listed in the previous paragraph.</p>	Rule 335-3-16-.12(2)
<p>3. <u>Severability Clause</u></p> <p>The provisions of this permit are declared to be severable and if any section, paragraph, subparagraph, subdivision, clause, or phrase of this permit shall be adjudged to be invalid or unconstitutional by any court of competent jurisdiction, the judgment shall not affect, impair, or invalidate the remainder of this permit, but shall be confined in its operation to the section, paragraph, subparagraph, subdivision, clause, or phrase of this permit that shall be directly involved in the controversy in which such judgment shall have been rendered.</p>	Rule 335-3-16-.05(e)
<p>4. <u>Compliance</u></p> <p>(a) The permittee shall comply with all conditions of ADEM Admin. Code 335-3. Noncompliance with this permit will constitute a violation of the Clean Air Act of 1990 and ADEM Admin. Code 335-3 and may result in an enforcement action; including but not limited to, permit termination, revocation and reissuance, or modification; or denial of a permit renewal application by the permittee.</p> <p>(b) The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.</p>	<p>Rule 335-3-16-.05(f)</p> <p>Rule 335-3-16-.05(g)</p>

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<p>5. <u>Termination for Cause</u></p> <p>This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance will not stay any permit condition.</p>	Rule 335-3-16-.05(h)
<p>6. <u>Property Rights</u></p> <p>The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.</p>	Rule 335-3-16-.05(i)
<p>7. <u>Submission of Information</u></p> <p>The permittee must submit to the Department, within 30 days or for such other reasonable time as the Department may set, any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon receiving a specific request, the permittee shall also furnish to the Department copies of records required to be kept by this permit.</p>	Rule 335-3-16-.05(j)
<p>8. <u>Economic Incentives, Marketable Permits, and Emissions Trading</u></p> <p>No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.</p>	Rule 335-3-16-.05(k)
<p>9. <u>Certification of Truth, Accuracy, and Completeness:</u></p> <p>Any application form, report, test data, monitoring data, or compliance certification submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.</p>	Rule 335-3-16-.07(a)

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<p>10. <u>Inspection and Entry</u></p> <p>Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized representatives of the Alabama Department of Environmental Management and EPA to conduct the following:</p> <p>(a) Enter upon the permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept pursuant to the conditions of this permit;</p> <p>(b) Review and/or copy, at reasonable times, any records that must be kept pursuant to the conditions of this permit;</p> <p>(c) Inspect, at reasonable times, this facility's equipment (including monitoring equipment and air pollution control equipment), practices, or operations regulated or required pursuant to this permit;</p> <p>(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or other applicable requirements.</p>	Rule 335-3-16-.07(b)
<p>11. <u>Compliance Provisions</u></p> <p>(a) The permittee shall continue to comply with the applicable requirements with which the company has certified that it is already in compliance.</p> <p>(b) The permittee shall comply in a timely manner with applicable requirements that become effective during the term of this permit.</p>	Rule 335-3-16-.07(c)
<p>12. <u>Compliance Certification</u></p> <p>A compliance certification shall be submitted annually on, or before, March 4.</p> <p>(a) The compliance certification shall include the following:</p> <p>(1) The identification of each term or condition of this permit that is the basis of the certification;</p> <p>(2) The compliance status;</p>	Rule 335-3-16-.07(e)

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<p>(3) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);</p> <p>(4) Whether compliance has been continuous or intermittent;</p> <p>(5) Such other facts as the Department may require to determine the compliance status of the source;</p> <p>(b) The compliance certification shall be submitted to:</p> <p style="padding-left: 40px;">Alabama Department of Environmental Management Air Division P.O. Box 301463 Montgomery, AL 36130-1463 and to:</p> <p style="padding-left: 40px;">Air and EPCRA Enforcement Branch EPA Region IV 61 Forsyth Street, SW Atlanta, GA 30303</p>	
<p>13. <u>Reopening for Cause</u></p> <p>Under any of the following circumstances, this permit will be reopened prior to the expiration of the permit:</p> <p>(a) Additional applicable requirements under the Clean Air Act of 1990 become applicable to the permittee with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire.</p> <p>(b) Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into this permit.</p> <p>(c) The Department or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.</p>	<p>Rule 335-3-16-.13(5)</p>

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<p>(d) The Administrator or the Department determines that this permit must be revised or revoked to assure compliance with the applicable requirements.</p>	
<p>14. <u>Additional Rules and Regulations</u></p> <p>This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.</p>	<p>§22-28-16(d), Code of Alabama 1975, as amended</p>
<p>15. <u>Equipment Maintenance or Breakdown</u></p> <p>(a) In the case of shutdown of air pollution control equipment (which operates pursuant to any permit issued by the Director) for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the Director at least twenty-four (24) hours prior to the planned shutdown, unless such shutdown is accompanied by the shutdown of the source which such equipment is intended to control. Such prior notice shall include, but is not limited to the following:</p> <ol style="list-style-type: none"> (1) Identification of the specific facility to be taken out of service as well as its location and permit number; (2) The expected length of time that the air pollution control equipment will be out of service; (3) The nature and quantity of emissions of air contaminants likely to occur during the shutdown period; (4) Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period; (5) The reasons that it would be impossible or impractical to shut down the source operation during the maintenance period. 	<p>Rule 335-3-1-.07(1) & Rule 335-3-1-.07(2)</p>

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<p>(b) In the event that there is a breakdown of equipment or upset of process in such a manner as to cause, or is expected to cause, increased emissions of air contaminants which are above an applicable standard, the person responsible for such equipment shall notify the Director within 24 hours or the next working day and provide a statement giving all pertinent facts, including the estimated duration of the breakdown. The Director shall be notified when the breakdown has been corrected.</p>	
<p>16. <u>Operation of Capture and Control Devices</u></p> <p>All air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.</p>	<p>§22-28-16(d), Code of Alabama 1975, as amended</p>
<p>17. <u>Obnoxious Odors</u></p> <p>This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.</p>	<p>Rule 335-3-1-.08</p>
<p>18. <u>Fugitive Dust</u></p> <p>(a) Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.</p> <p>(b) Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:</p> <ol style="list-style-type: none"> (1) By the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic; (2) By reducing the speed of vehicular traffic to a point below that at which dust emissions are created; (3) By paving; 	<p>Rule 335-3-4-.02</p>

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<p>(4) By the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;</p> <p>Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.</p>	
<p>19. <u>Additions and Revisions</u></p> <p>Any modifications to this source shall comply with the modification procedures in Rules 335-3-16-.13 or 335-3-16-.14.</p>	Rule 335-3-16-.13 & Rule 335-3-16-.13.14
<p>20. <u>Recordkeeping Requirements</u></p> <p>(a) Records of required monitoring information of the source shall include the following:</p> <ul style="list-style-type: none">(1) The date, place, and time of all sampling or measurements;(2) The date analyses were performed;(3) The company or entity that performed the analyses;(4) The analytical techniques or methods used;(5) The results of all analyses; and(6) The operating conditions that existed at the time of sampling or measurement. <p>(b) Retention of records of all required monitoring data and support information of the source for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by the permit</p>	Rule 335-3-16-.05(c)(2)

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<p>21. <u>Reporting Requirements</u></p> <p>(a) Reports to the Department of any required monitoring shall be submitted at least every 6 months. All instances of deviations from permit requirements must be clearly identified in said reports. All required reports must be certified by a responsible official consistent with Rule 335-3-16-.04(9).</p> <p>(b) Deviations from permit requirements shall be reported within 48 hours or 2 working day of such deviations, including those attributable to upset conditions as defined in the permit. The report will include the probable cause of said deviations, and any corrective actions or preventive measures that were taken.</p>	<p>Rule 335-3-16-.05(c)(3).</p>
<p>22. <u>Emission Testing Requirements</u></p> <p>Each point of emission which requires testing will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.</p> <p>The Air Division must be notified in writing at least 10 days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.</p> <p>To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:</p> <p>(1) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.</p> <p>(2) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedures require probe cleaning).</p> <p>(3) A description of the process(es) to be tested including the feed rate, any operating parameters used to control or influence the operations, and the rated capacity.</p>	<p>Rule 335-3-1-.05(3) & Rule 335-3-1-.04(1)</p> <p>Rule 335-3-1-.04</p>

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<p>(4) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.</p> <p>A pretest meeting may be held at the request of the source owner or the Air Division. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.</p> <p>All test reports must be submitted to the Air Division within 30 days of the actual completion of the test unless an extension of time is specifically approved by the Air Division.</p>	<p>Rule 335-3-1-.04</p>
<p>23. <u>Payment of Emission Fees</u></p> <p>Annual emission fees shall be remitted each year according to the fee schedule in ADEM Admin. Code R. 335-1-7-.04.</p>	<p>Rule 335-1-7-.04</p>
<p>24. <u>Other Reporting and Testing Requirements</u></p> <p>Submission of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require emission testing at any time.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>25. <u>Title VI Requirements (Refrigerants)</u></p> <p>Any facility having appliances or refrigeration equipment, including air conditioning equipment, which use Class I or Class II ozone-depleting substances as listed in 40 CFR Part 82, Subpart A, Appendices A and B, shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82, Subpart F.</p> <p>No person shall knowingly vent or otherwise release any Class I or Class II substance into the environment during the repair, servicing, maintenance, or disposal of any device except as provided in 40 CFR Part 82, Subpart F.</p> <p>The responsible official shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the US EPA and the Department as required.</p>	<p>40 CFR Part 82</p>

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<p>26. <u>Chemical Accidental Prevention Provisions</u></p> <p>If a chemical listed in Table 1 of 40 CFR Part 68.130 is present in a process in quantities greater than the threshold quantity listed in Table 1, then:</p> <p>(a) The owner or operator shall comply with the provisions in 40 CFR Part 68.</p> <p>(b) The owner or operator shall submit one of the following:</p> <p>(1) A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR Part 68 § 68.10(a) or,</p> <p>(2) A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan.</p>	<p>40 CFR Part 68</p>
<p>27. <u>Display of Permit</u></p> <p>This permit shall be kept under file or on display at all times at the site where the facility for which the permit is issued is located and will be made readily available for inspection by any or all persons who may request to see it.</p>	<p>Rule 335-3-14-.01(1)(d)</p>
<p>28. <u>Circumvention</u></p> <p>No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes any emission of air contaminant which would otherwise violate the Division 3 rules and regulations.</p>	<p>Rule 335-3-1-.10</p>
<p>29. <u>Visible Emissions</u></p> <p>Unless otherwise specified in the Unit Specific provisos of this permit, any source of particulate emissions shall not discharge more than one 6-minute average opacity greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate emissions greater than 40%. Opacity will be determined by 40 CFR Part 60, Appendix A, Method 9, unless otherwise specified in the Unit Specific provisos of this permit.</p>	<p>Rule 335-3-4-.01(1)</p>

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<p>30. <u>Fuel-Burning Equipment</u></p> <p>(a) Unless otherwise specified in the Unit Specific provisos of this permit, no fuel-burning equipment may discharge particulate emissions in excess of the emissions specified in Part 335-3-4-.03.</p> <p>(b) Unless otherwise specified in the Unit Specific provisos of this permit, no fuel-burning equipment may discharge sulfur dioxide emissions in excess of the emissions specified in Part 335-3-5-.01.</p>	<p>Rule 335-3-4-.03</p> <p>Rule 335-3-5-.01</p>
<p>31. <u>Process Industries – General</u></p> <p>Unless otherwise specified in the Unit Specific provisos of this permit, no process may discharge particulate emissions in excess of the emissions specified in Part 335-3-4-.04.</p>	<p>Rule 335-3-4-.04</p>
<p>32. <u>Averaging Time for Emission Limits</u></p> <p>Unless otherwise specified in the permit, the averaging time for the emission limits listed in this permit shall be the nominal time required by the specific test method.</p>	<p>Rule 335-3-1-.05</p>
<p>33. <u>Compliance Assurance Monitoring (CAM)</u></p> <p>Conditions (a) through (d) that follow are general conditions applicable to emissions units that are subject to the CAM requirements. Specific requirements related to each emissions unit are contained in the unit specific provisos and the attached CAM appendices.</p> <p>(a) Operation of Approved Monitoring</p> <p>(1) <i>Commencement of operation.</i> The owner or operator shall conduct the monitoring required under this section and detailed in the unit specific provisos and CAM appendix of this permit (if required) upon issuance of the permit, or by such later date specified in the permit pursuant to §64.6(d).</p> <p>(2) <i>Proper maintenance.</i> At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.</p>	<p>§64.7</p>

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<p>(3) <i>Continued operation.</i> Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.</p> <p>(4) <i>Response to excursions or exceedances.</i></p> <p>(a) Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.</p>	

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<p>(b) Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.</p> <p>(5) <i>Documentation of need for improved monitoring.</i> After approval of monitoring under this part, if the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the Department and, if necessary, submit a proposed modification to the permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.</p> <p>(b) Quality Improvement Plan (QIP) Requirements</p> <p>(1) Based on the results of a determination made under Section 33(a)(4)(b) above, the Administrator or the permitting authority may require the owner or operator to develop and implement a QIP. Consistent with 40 CFR §64.6(c)(3), the permit may specify an appropriate threshold, such as an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a reporting period, for requiring the implementation of a QIP. The threshold may be set at a higher or lower percent or may rely on other criteria for purposes of indicating whether a pollutant-specific emissions unit is being maintained and operated in a manner consistent with good air pollution control practices.</p> <p>(2) Elements of a QIP:</p>	<p>§64.8</p>

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<ul style="list-style-type: none"> (i) The owner or operator shall maintain a written QIP, if required, and have it available for inspection. (ii) The plan initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate: <ul style="list-style-type: none"> (I) Improved preventive maintenance practices. (II) Process operation changes. (III) Appropriate improvements to control methods. (IV) Other steps appropriate to correct control performance. (V) More frequent or improved monitoring (only in conjunction with one or more steps under paragraphs (2)(b)(i) through (iv) above). (3) If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the Department if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined. (4) Following implementation of a QIP, upon any subsequent determination pursuant to Section 33(a)(4)(b) above, the Department may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have: <ul style="list-style-type: none"> (i) Failed to address the cause of the control device performance problems; or 	

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<ul style="list-style-type: none"> <li style="margin-left: 40px;">(ii) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. <li style="margin-left: 20px;">(5) Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act. <li style="margin-left: 20px;">(c) Reporting and Recordkeeping Requirements <li style="margin-left: 40px;">(1) General reporting requirements <ul style="list-style-type: none"> <li style="margin-left: 20px;">(i) On and after the date specified in Section 33(a)(1) above by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with ADEM Admin. Code R. 335-3-16-.05(c)3. <li style="margin-left: 20px;">(ii) A report for monitoring under this part shall include, at a minimum, the information required under ADEM Admin. Code R. 335-3-16-.05(c)3. and the following information, as applicable: <ul style="list-style-type: none"> <li style="margin-left: 20px;">(I) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; <li style="margin-left: 20px;">(II) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and 	<p>§64.9</p>

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<p>(III) A description of the actions taken to implement a QIP during the reporting period as specified in Section 33(b) above. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.</p> <p>(2) General recordkeeping requirements.</p> <p>(i) The owner or operator shall comply with the recordkeeping requirements specified in ADEM Admin. Code R. 335-3-16-.05(c)2.. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to Section 33(b) above and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).</p> <p>(ii) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.</p>	

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<p>(d) Savings Provisions</p> <p>(1) Nothing in this part shall:</p> <p>(i) Excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act. The requirements of this part shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the purpose of determining the monitoring to be imposed under separate authority under the Act, including monitoring in permits issued pursuant to title I of the Act. The purpose of this part is to require, as part of the issuance of a permit under title V of the Act, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of this part.</p> <p>(ii) Restrict or abrogate the authority of the Department to impose additional or more stringent monitoring, recordkeeping, testing, or reporting requirements on any owner or operator of a source under any provision of the Act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable.</p> <p>(iii) Restrict or abrogate the authority of the Department to take any enforcement action under the Act for any violation of an applicable requirement or of any person to take action under section 304 of the Act.</p>	<p>§64.10</p>

Summary Page for Facility-Wide Emissions

Permitted Operating Schedule: 24 Hours/Day x 365 Days/Year = 8760 Hours/Year

Emission limitations:

Emission Point #	Description	Pollutant	Emission Limit	Regulation
	Facility-Wide VOC	VOC	< = 245 Ton/yr	Rule 335-3-14-.04 (Anti-PSD)
	Facility-Wide CO	CO	< = 245 Ton/yr	Rule 335-3-14-.04 (Anti-PSD)

Provisos for Facility-Wide Emissions

Federally Enforceable Provisos	Regulations
<i>Applicability</i>	
1. This facility has enforceable limits in order to prevent it from being subject to the provisions of <i>ADEM Admin. Code R. 335-3-14-.04</i> , “Air Permits Authorizing Construction in Clean Air Areas” [Prevention of Significant Deterioration (PSD)].	Rule 335-3-14-.04 [Anti-PSD]
2. This facility meets the requirements specified in Rule 335-3-16-.03 “Major Source Operating Permits” and therefore this facility shall be subject to Rule 335-3-16 and this subpart of this permit.	Rule 335-3-16-.03
<i>Emissions Standards</i>	
1. The Facility as a whole shall adhere to the following requirements:	Rule 335-3-16-.05(a) & Rule 335-3-14-.04 [Anti-PSD]
(a) Volatile Organic Compounds (VOC) shall not exceed 245 Tons per rolling 12-month period.	
(b) Carbon Monoxide (CO) shall not exceed 245 Tons per rolling 12-month period.	
(c) Emissions for these compounds shall be accumulated over a consecutive twelve month period.	
<i>Compliance and Performance Test Methods and Procedures</i>	
1. Each unit located at this located at this facility shall be tested in accordance with that unit-specific subpart of this permit.	Rule 335-3-16-.05(c)(1)(i) & Rule 335-3-1-.05
2. Monthly calculations as described in proviso 1 of the <i>recordkeeping and reporting</i> section of this subpart of this permit shall be performed, maintained, and compared with the limits outlined in proviso 1 of the <i>emission standards</i> section of this subpart of this permit.	Rule 335-3-16-.05(c)(1), Rule 335-3-1-.04, & Rule 335-3-16-.05(c)(1)(ii)
<i>Emission Monitoring</i>	
1. Each unit located at this facility shall be monitored according to the emissions plan outlined in that unit-specific subpart of this permit.	Rule 335-3-16-.05(c)(1), Rule 335-3-1-.04, & Rule 335-3-16-.05(c)(1)(ii)

Provisos for Facility-Wide Emissions

Federally Enforceable Provisos	Regulations
<p>2. For the purpose of indicating compliance with proviso 1 of <i>emission standards</i> subpart of this permit, a monthly calculation of the following information shall be performed within 15 days of the start of the month.</p> <p>(a) Monthly calculations of the facility-wide emissions shall be performed using:</p> <p style="padding-left: 40px;">(1) Monthly CO and VOC emissions from all engines, as calculated in proviso 1(d)(6) of the <i>Recordkeeping and Reporting</i> section of the Facility Engines subpart of this permit.</p> <p style="padding-left: 40px;">(2) Monthly CO and VOC emissions from all flares, as calculated in proviso 1(c) of the <i>Recordkeeping and Reporting</i> section of the Facility Wells subpart of this permit.</p> <p>(b) The facility-wide emissions in Ton/Month shall be calculated as follows:</p> <p style="padding-left: 40px;">(1) CO emissions (Tons/Month) = Total Engine CO (Tons/Month) + Total Flare CO (Tons/Month) + Total Heater CO (Tons/Month)</p> <p style="padding-left: 40px;">(2) VOC emissions (Tons/Month) = Total Engine VOC (Tons/Month) + Total Flare VOC (Tons/Month) + Total Heater VOC (Tons/Month)</p> <p>(c) The facility-wide emissions in Ton/12-Months shall be calculated as follows:</p> <p style="padding-left: 40px;">(1) CO emission (Tons/12-Months) = \sum of previous 11 month's CO emissions (Tons/Month) + current month's CO emissions (Tons/Month)</p> <p style="padding-left: 40px;">(2) VOC emission (Tons/12-Months) = \sum of previous 11 month's VOC emissions (Tons/Month) + current month's VOC emissions (Tons/Month)</p> <p>(d) The frequency of the calculations may be modified upon Departmental approval.</p>	<p>Rule 335-3-16-.05(c)(2) & Rule 335-3-1-.04</p>

Provisos for Facility-Wide Emissions

Federally Enforceable Provisos

Regulations

3. If the facility-wide emission for either CO or VOC are calculated as required in 2(c) to be above 195 Tons/12-Months, the Department shall be notified as outlined in Appendix D of this Permit.

Recordkeeping and Reporting Requirements

1. A monthly record of the following shall be maintained and made available for inspection for a period of five (5) years:

- (a) The information in *emissions monitoring* provisos 2(b)&(c).
- (b) The date, starting time and duration of each deviation from the requirements specified in proviso 1 of the *Emission Standards* subpart of this permit along with the cause and corrective actions taken.

2. Monitoring reports meeting the requirements specified in proviso 2(a) through (c) of this section of this subpart shall be submitted to the Department.

Rule 335-3-16-.05(c)(3)(i)
& Rule 335-3-14-.04
[Anti-PSD]

- (a) Each report shall identify each incidence of deviation from a permit term or condition including those that occur during startups, shutdowns, and malfunctions.
- (b) Each report shall cover a calendar semi-annual period and shall be submitted within thirty days of the end of each reporting period. Each report shall include the following information:
 - (1) Each deviation and/or excess emissions event and/or malfunction. If no deviation event occurred during the reporting period, a statement that indicates there were no deviations from the permit requirements shall be included in the report.
 - (2) Calculated tons/12-months of both CO and VOC as required by *emissions monitoring* provisos 2(b)&(c).
- (c) The report content specified in provisos 2(a) and (b) of this section may be modified upon receipt of Departmental approval.

Provisos for Facility-Wide Emissions

Federally Enforceable Provisos	Regulations
3. Each deviation from the requirements specified in this subpart, including those that occur during startups, shutdowns, and malfunctions, shall be reported to the Department in a manner that complies with proviso 15(b) and 21(b) of the general proviso subpart of this permit.	Rule 335-3-16-.05(c)(2), Rule 335-3-1-.04, & Rule 335-3-16-.05(c)(3)(ii)

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Summary Page for the Facility Engines

Permitted Operating Schedule: **24 Hours/Day x 365 Days/Year = 8760 Hours/Year**

Emission limitations:

Emission Point #	Description	Pollutant	Emission Limit	Regulation
GEN1	Field Compressor Engine 203 BHP Gas- Fired, Four-stroke Rich-burn ICE	NO _x	1.0 g NO _x /HP-hr, OR 82 ppmvd NO _x at 15% O ₂	40 CFR §60.4243
		CO	2.0 g CO/HP-hr, OR 270 ppmvd CO at 15% O ₂	40 CFR §60.4243
0215B	Wellsite Generator Engine 145 BHP 4SRB	VOC	0.7 g VOC/HP-hr, OR 60 ppmvd VOC at 15% O ₂	40 CFR §60.4243
		Opacity	No more than one 6 min avg > 20% Or No 6 min avg. > 40%	Rule 335-3-4-.01(1)

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Provisos for the Facility Engines

Federally Enforceable Provisos	Regulations
<i>Applicability</i>	
1. The engines have emission standards required by 40 CFR Part 60 Subpart JJJJ.	40 CFR §60.4230
2. The engines shall be subject to the applicable requirements of ADEM Admin. Code R. 335-3-4-.01, “Visible Emissions” for Control of Particulate Emissions, as specified in the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-4-.01(1)
<i>Emissions Standards</i>	
1. Each engine shall meet the following emission standards required by 40 CFR Part 60 Subpart JJJJ:	40 CFR §60.4243
(a) <u>Either</u> the engine shall adhere to the following emission standards in grams per horsepower per hour.	
(1) (1.0 g NO _x)/(HP-hr)	
(2) (2.0 g CO)/(HP-hr)	
(3) (0.7 g VOC)/(HP-hr)	
(b) <u>Or</u> the engine shall adhere to the following emission standards in parts per million by volume, dry adjusted to 15% oxygen:	
(1) 82 ppmvd NO _x at 15% O ₂	
(2) 270 ppmvd CO at 15% O ₂	
(3) 60 ppmvd VOC at 15% O ₂	
2. Each engine shall meet the following opacity standards:	
(a) Except for one 6-minute period during any 60-minute period, the unit shall not discharge into the atmosphere particulate that results in an opacity greater than 20%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)(a)
(b) At no time shall the unit discharge into the atmosphere particulate that results in an opacity greater than 40%, as determined by a 6-minute average.	Rule 335-3-4-.01(1)(b)

Provisos for the Facility Engines

Federally Enforceable Provisos	Regulations
<i>Compliance and Performance Test Methods and Procedures</i>	
1. Compliance with the 40 CFR Part 60 Subpart JJJJ emission standards specified in proviso 1 of the <i>Emission Standards</i> section of this subpart of this permit shall be shown by performance tests meeting the following requirements:	40 CFR §60.4244
(a) Each performance test shall consist of three runs of at least 1-hour in duration.	40 CFR §60.4244(c)
(b) Testing for compliance with the NO _x , CO, and VOC limits shall use test methods and procedures as specified in 40 CFR Part 60 Subpart JJJJ Table 2.	40 CFR §60.4244 40 CFR Part 60 Subpart JJJJ Table 2
(c) Emission factors shall be determined during each test conducted as grams per horsepower-hour [g/HP-hr] or parts per million by volume (dry basis) corrected to 15% oxygen [ppmvd at 15% O ₂].	40 CFR Part 60 Subpart JJJJ Table 1
(d) Each test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified in Table 2 of 40 CFR Part 60 Subpart JJJJ.	40 CFR §60.8 40 CFR §60.4244(a)
2. Compliance with the opacity requirements specified in proviso 2 of the <i>Emission Standards</i> section of this subpart of this permit shall be shown by utilizing Method 9 of 40 CFR Part 60, Appendix A when needed as determined by monitoring specified in proviso 2 of the <i>Emission Monitoring</i> section of this subpart of this permit.	Rule 335-3-4-.01(2)
<i>Emissions Monitoring</i>	
1. Testing the engines' NO _x , CO, and VOC limits listed in <i>Emission Standards</i> proviso 1 as specified by <i>Compliance and Performance Test Methods and Procedures</i> proviso 1 shall be conducted within one year of initial operation and every three years thereafter. The frequency may be changed upon Department approval:	40 CFR §60.4244
2. If visible emissions are ever observed from engine, permittee shall determine compliance with the opacity standards listed in <i>Emission Standards</i> proviso 2 by following the same procedures used for determining flare opacity in Appendix C of this permit.	Rule 335-3-4-.01

Provisos for the Facility Engines

Federally Enforceable Provisos	Regulations
<i>Recordkeeping and Reporting Requirements</i>	
1. A record of the information specified in provisos 1(a) through (e) of this section of this subpart shall be maintained and made available in a form suitable for inspection for a period of five (5) years.	
(a) The date, starting time and duration of each deviation from the requirements specified in this subpart along with the cause and corrective actions taken.	
(b) The date, starting time and, and duration of each malfunction, along with steps taken to minimize emissions, and corrective actions taken.	
(c) Keeping a maintenance plan and records of conducted maintenance.	40 CFR §60.4243
(d) For the engine, the following data shall be recorded and maintained onsite:	
(1) Operating hours of engine = Operating Hours/Month	Rule 335-3-14-.04 [Anti-PSD]
(2) A copy of the fuel gas H ₂ S and BTU analysis OR supplier's certification.	
(3) Engine fuel consumption = Fuel MScf/Month	Rule 335-3-14-.04 [Anti-PSD]
(4) NO _x , CO, and VOC emission factors determined for <i>Compliance and Performance Test Methods and Procedures</i> proviso 1(c).	40 CFR §60.4243 Rule 335-3-14-.04 [Anti-PSD]
(5) Unit NO _x , CO, & VOC emissions shall be calculated monthly as follows:	Rule 335-3-14-.04 [Anti-PSD]

Provisos for the Facility Engines

Federally Enforceable Provisos

Regulations

[Eng. CO (TPM)] =	[Op. Time (Hrs/Month)]×[Eng. Power (HP)]×[Test factor (g CO/HP-Hr)]×[1 Ton/9.072E+5 g]
OR [Eng. CO (TPM)] =	[Monthly Fuel Usage (MMBtu/Month)]×[Test EF (lb CO/MMBtu)]×[1 Ton/2000 lb]
[Eng. NO _x (TPM)] =	[Op. Time (Hrs/Month)]×[Eng. Power (HP)]×[Test factor (g NO _x /HP-Hr)]×[1 Ton/9.072E+5 g]
OR [Eng. NO _x (TPM)] =	{Σ _{Month} [Fuel Feed (MMscf/day)]} × [Fuel Heat Val. (MMbtu/MMscf)] × [Test EF (lb NO _x /MMBtu)] × [1 Ton/2000 lb]
[Eng. VOC (TPM)] =	[Op. Time (Hrs/Month)]×[Eng. Power (HP)]×[Test EF (g VOC/HP-Hr)]×[1 Ton/9.072E+5 g]
OR [Eng. VOC (TPM)] =	{Σ _{Month} [Fuel Feed (MMscf/day)]} × [Fuel Heat Val. (MMbtu/MMscf)] × [Test EF (lb VOC/MMBtu)] × [1 Ton/2000 lb]

- (6) Each month, the total emissions of the past 12 months for each listed criteria pollutant shall be summed.
- (7) The frequency of these calculations may be modified upon Departmental approval.

(e) These records may be kept in electronic form, provided that they are readily accessible. Alternatively, they may be kept in hardcopy form.

2. Monitoring reports meeting the requirements specified in provisos 2(a) through (d) of this section of this subpart shall be submitted to the Department for all units.

(a) Each report shall identify each incidence of deviation from a permit term or condition including those that occur during startups, shutdowns, and malfunctions. A deviation shall mean any instance in which emission limits, emission standards, and/or work practices were not complied with, as indicated by observations, data collection, and monitoring specified in this permit.

Rule 335-3-14-.04
[Anti-PSD]

Rule 335-3-14-.04
[Anti-PSD]

Provisos for the Facility Engines

Federally Enforceable Provisos	Regulations
<p>(b) A summary of monthly measurements and calculations required by <i>Recordkeeping and Reporting Requirements</i> provisos 1(d)(5)&(6) shall be included in all reports</p> <p>(c) The most recent NOX, CO, and VOC emission factors determined for <i>Compliance and Performance Test Methods and Procedures</i> proviso 1(c).</p> <p>(d) Reports shall be semiannual and submitted on the following schedule, or as otherwise approved by the Department: <i>Reporting</i> Jan. 1 – June 30 <i>Submitted</i> July 31 <i>Period:</i> July 1 – Dec. 31 <i>by:</i> Jan. 31</p>	<p>40 CFR §60.4243 Rule 335-3-14-.04 [Anti-PSD]</p>
<p>3. Each deviation from the requirements specified in this subpart, including those that occur during startups, shutdowns, and malfunctions, shall be reported to the Department in a manner that complies with proviso 15(b) and 21(b) of the <i>General Permit Provisos</i> subpart of this permit.</p>	

Summary Page for Wells

Permitted Operating Schedule: **24 Hours/Day x 365 Days/Year = 8760 Hours/Year**

Emission limitations:

Emission Point #	Description	Pollutant	Emission Limit	Regulation
(8) Constructed wells (as of permit issuance)				
	CCL&T 4-1 & CCL&T 3-4 (shared site), CCL&T 2-15, Pate 3-11, CCL&T 3-7, CCL&T 34-12, CCL&T 34-15, CCL&T 35-13			
(67) Well Flares:				
0401A	CCL&T 4-1 & CCL&T 3-4			
0215A	CCL&T 2-15			
0311A	Pate 3-11			
0307A	CCL&T 3-7			
3412A	CCL&T 34-12			
3415A	CCL&T 34-15			
3513A	CCL&T 35-13			
		H ₂ S	20 ppbv of H ₂ S off site	Rule 335-3-5-.03(2)
	@ Available Sulfur <= 10 LTons/Day	SO ₂	As set by rule*	Rule 335-3-5-.03(3)
		NO _x	None*	
		VOC	None*	
		CO	None*	
			*See Facility-Wide limit of 245 Ton/yr	
		Opacity	No more than one 6 min avg> 20% Or No 6 min avg. > 40%	Rule 335-3-4-.01(1)
(8) Wellheads:				
	Each Hydraulically Fractured or Re-Fractured well (0 as of permit issuance)	VOC	Work Practices per §60.5375a	§60.5365a
(7) Sites				
	Each collections of fugitive emissions components (3 as of permit issuance: CCL&T 2-15, CCL&T 3-7, CCL&T 35-13)	VOC CH ₄	500 ppm leak detected via monitoring per §60.5397a(a)	§60.5365a

Provisos for Facility Wells

Federally Enforceable Provisos	Regulations
<i>Applicability</i>	
1. Each source listed on the summary page is subject to Rule 335-3-16.	Rule 335-3-16-.03
2. The wells share an enforceable limit in order to prevent the facility from being subject to the provisions of <i>ADEM Admin. Code R. 335-3-14-.04</i> , “Air Permits Authorizing Construction in Clean Air Areas” [Prevention of Significant Deterioration (PSD)].	Rule 335-14-.04 [Anti-PSD]
3. Each flare that burns gas that contains more than 0.10 grains of hydrogen (H ₂ S) per standard cubic foot (Scf) shall be subject to <i>ADEM Admin. Code R. 335-3-5-.03</i> .	Rule 335-3-5-.03(1)
4. Each well shall be subject to 40 CFR Part 64, and the conditions of <i>General Permit Provisos 33</i> apply.	40 CFR §64.2 [CAM]
5. Each flare shall be subject to the applicable requirements of <i>ADEM Admin. Code R. 335-3-4-.01</i> , “ <i>Visible Emissions</i> ” for Control of Particulate Emissions, as specified in the Alabama Department of Environmental Management Administrative Code and in this subpart of this permit.	Rule 335-3-4-.01(1)
6. The requirements of 40 CFR 60 Subpart OOOOa apply as follows to sources which commenced construction, reconstruction, or modification after September 18, 2015, for which applicable definitions are listed in §60.5430a:	
(a) Each well conducting a well completion operation following hydraulic fracturing or refracturing.	40 CFR §60.5365a(a)
(b) Each collection of fugitive emissions components which is defined in §60.5430a as the wellsite-wide grouping of valves, connectors, flares, pressure relief devices, covers, closed vent systems, tank hatches, compressors, and other equipment in VOC use at a well and constructed or reconstructed after September 18, 2015, shall comply with the requirements of §60.5397a.	40 CFR §60.5365a(i)

Provisos for Facility Wells

Federally Enforceable Provisos	Regulations
<i>Emission Standards</i>	
<p>1. Each process gas stream containing more than 0.10 of a grain of hydrogen sulfide per Scf shall not be emitted into the atmosphere unless it is properly burned to maintain the ground level concentrations of hydrogen sulfide to less than twenty (20) parts per billion beyond plant property limits, averaged over a thirty (30) minute period.</p>	Rule 335-3-5-.03(2)
<p>2. In order to follow the CAM plan requirements in Appendix B of this permit, each well site shall be equipped with a flare and shall be designed such that all produced natural gas, including tank vapor, must be routed either to the flare, fuel gas system, or plant pipeline at all times:</p> <p>(a) Each flare shall be equipped, and operated, with:</p> <p style="margin-left: 40px;">(1) An Air Assist system</p> <p style="margin-left: 40px;">(2) A spark igniter or continuous pilot light</p> <p>(b) Natural gas shall not be emitted into the atmosphere unless it is properly burned except when unsafe or technically infeasible, such as during the initial flowback stage of well completion.</p>	Rule 335-3-14-.04 [Anti-PSD] 40 CFR §64.2 [CAM]
<p>3. The flare at each well shall meet the following opacity standards:</p> <p>(a) Except for one 6-minute period during any 60-minute period, the unit shall not discharge into the atmosphere particulate that results in an opacity greater than 20%, as determined by a 6-minute average.</p> <p>(b) At no time shall the unit discharge into the atmosphere particulate that results in an opacity greater than 40%, as determined by a 6-minute average.</p>	Rule 335-3-4-.01(1)(a)
<p>4. The following requirements shall apply to each source subject to 40 CFR 60 Subpart OOOOa:</p> <p>(a) Each hydraulically fractured or refractured well completion operation shall follow the methods and procedures specified in §60.5375a(a) & (f).</p>	Rule 335-3-4-.01(1)(b)
	40 CFR §60.5365a(a) & (f)

Provisos for Facility Wells

Federally Enforceable Provisos	Regulations
<p>(b) All detected sources of fugitive emissions, defined as any visible emission from a <i>fugitive emissions component</i> observed using optical gas imaging or an instrument reading of 500 ppm (methane or VOC) or greater using Method 21, observed from any <i>collection of fugitive emissions components</i> shall be repaired as per §60.5397a(h).</p>	40 CFR §60.5397a(h)
<p><i>Compliance and Performance Test Methods and Procedures</i></p>	
<p>1. Compliance with CAM for each flare shall be observed by adhering to the CAM plan in <i>Appendix B</i> of this permit.</p>	40 CFR §64.6(b) & (c)
<p>2. Daily visual inspections and visible emissions observations shall be conducted as described in proviso 1 of the <i>Emissions Monitoring</i> subsection using either Method 9 OR Method 22 of Appendix A of 40 CFR Part 60.</p>	Rule 335-3-16-.05(c)(1)(i) Rule 335-3-1-.05
<p>3. Each well gas sample shall be analyzed using the following methods and procedures:</p>	Rule 335-3-16-.05(c)(1)(i) & Rule 335-3-1-.05
<p>(a) For H₂S Content, while utilizing the Tutwiler procedures in 40 CFR §60.648 or the chromatographic analysis procedures in ASTM E-260 or the stain tube procedures in GPA 2377-86 or those provided by the stain tube manufacture. [SG Stream (H₂S Mole %)]</p>	
<p>(b) For VOC mole percent, Molecular Weight, and BTU Content, while utilizing the chromatographic analysis procedures in 40 CFR Part 60 Appendix A, Method 18, Method 25A, ASTM Method D1826-77, or equivalent methods and procedures. [SG Stream (VOC Mole%)] [SG Stream (Mole Wt)] [SG Stream (BTU/Scf)]</p>	
<p>(c) The analysis methods used, monitoring locations, sampling frequencies, components tested for, etc., may be altered upon receipt of Department approval.</p>	
<p>4. Newly fractured or refractured wells must be logged as in §60.5375a(b) and determine initial compliance as per §60.5410a(a) [§60.5375a(c)] and continuing compliance as per §60.5415a(a) [§60.5375a(d)].</p>	40 CFR §60.5375a

Provisos for Facility Wells

Federally Enforceable Provisos	Regulations
<p>5. Upon completion of a well, the facility shall submit a request for a Temporary Authorization to Operate including information. This notification will also satisfy the notification requirement from §60.5420a(a)(2) [§60.5375a(e)] for hydraulically fractured/refracted well completion operations.</p> <p style="margin-left: 40px;">(1) Well name</p> <p style="margin-left: 40px;">(2) Well UTM Coordinates</p> <p style="margin-left: 40px;">(3) Driving directions to the site OR a map showing the roads</p>	<p>Rule 335-3-14-.01(f) 40 CFR §60.5375a(c) & (e), 40 CFR §60.5410a(a)(1), & 40 CFR §60.5420a(a)(2)(ii)</p>
<p>6. For each <i>collection of fugitive emissions components</i>, develop an emissions monitoring plan in accordance with §60.5397a(c)-(e).</p>	<p>40 CFR §60.5397a(b)</p>
<p><i>Emission Monitoring</i></p>	
<p>1. Monitoring meeting the requirements specified in Appendix B of this permit shall be utilized for the all flares.</p>	<p>40 CFR §64.6(b) & (c)</p>
<p>2. Visual inspections and subsequent visible emissions observations shall be conducted as follows:</p> <p style="margin-left: 40px;">(a) A daily visual inspection of the flare shall be undertaken as outlined in Appendix C.</p> <p style="margin-left: 40px;">(b) If during this inspection, visible emissions are observed, then a visible emissions observation as outlined in Appendix C shall be undertaken for the appropriate type flare.</p>	<p>Rule 335-3-16-.05(c)(1), Rule 335-3-1-.04, & Rule 335-3-16-.05(c)(1)(ii)</p>
<p>3. Each <i>collection of fugitive emissions components</i> shall be monitored initially within 60 days of startup as specified in §60.5397a(f)(1) and semiannually thereafter as specified in §60.5397a(g).</p>	<p>40 CFR §60.5397a(b)-(g)</p>
<p>4. Each gas stream that can be combusted in a flare or as fuel gas shall have a sample of the gas stream collected at a frequency of no less than once every six months, though a single sample of combined gas streams captured at a common point may satisfy this for multiple gas streams.</p>	

Provisos for Facility Wells

Federally Enforceable Provisos

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Record Keeping and Reporting Requirements

1. For the purpose of demonstrating compliance with provisos 1 through 4 of the *Emission Standards* section of this subpart, a monthly record of the information specified in provisos 1(a) through (h) of this section of this subpart shall be maintained and made available for inspection for each flare for a period of five (5) years.

(a) For each gas stream that can be flared:

(1) A copy of each gas analysis for the stream OR a copy of each gas analysis for the stream in conjunction with another stream including:

- (i) Stream heating value (MMBtu/MScf)
- (ii) Stream VOC molecular weight (Lb VOC/Lb-mol)
- (iii) Stream H₂S Mole %

(2) Volume of gas burned in flare =
[Stream Volume Burned (MScf/Month)]

(b) The total emissions for all wells shall be calculated as follows:

(1) Well tons CO/month (CO TPM) shall be calculated as follows:

[Total Flare CO (TPM)] =	Σ [Indv. Flare CO (TPM)]
[Indv. Flare CO (TPM)] =	$\{\Sigma_{\text{Month}}[\text{Flare Feed (MMscf/day)}] * [\text{Flare Gas Heat Val. (MMbtu/MMscf)}]\} * [0.37 \text{ lb CO/MMBtu}] * [1 \text{ Ton}/2000 \text{ lb}]$

(2) Well tons NO_x/month (NO_x TPM) shall be calculated as follows:

[Total Flare NO _x (TPM)] =	Σ [Indv. Flare NO _x (TPM)]
[Indv. Flare NO _x (TPM)] =	$\{\Sigma_{\text{Month}}[\text{Flare Feed (MMscf/day)}] * [\text{Flare Gas Heat Val. (MMbtu/MMscf)}]\} * [0.068 \text{ lb NO}_x\text{/MMBtu}] * [1 \text{ Ton}/2000 \text{ lb}]$

Rule 335-3-16-.05(c)(2),
Rule 335-3-14.04 [Anti-PSD]
Rule 335-3-1-.04

Rule 335-3-16-.05(c)(2),
Rule 335-3-14.04 [Anti-PSD]
Rule 335-3-1-.04

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(3) Well tons VOC/month (VOC TPM) shall be calculated as follows:

[Total Flare VOC (TPM)] =	$\Sigma[\text{Indv. Flare VOC (TPM)}]$
[Indv. Flare VOC (TPM)] =	$\{\Sigma_{\text{Month}}[\text{Flare Feed (MMscf/day)}]\} * [\text{Feed Gas VOC MW (Lb VOC/Lb-mol)}] * [2626.95 \text{ Lb-mol/MMscf}] * [1 \text{ Ton}/2000 \text{ lb}] * [\text{Percent Uncombusted (2\%)}]$

- | | |
|--|---|
| <p>(c) The frequency of the calculations may be altered upon receipt of Departmental approval.</p> <p>(d) The date, starting time, duration, and results of all flare visible emissions observations or flare inspections.</p> <p>(e) The date, starting time, and duration of each deviation or exceedance of the requirements specified in this subpart, along with the emissions, cause and corrective actions taken.</p> <p>(f) A copy of all records required by 40 CFR 60 Subpart OOOOa, as specified in §60.5420a(c)(1) for fracked wells and §60.5420a(c)(15) for <i>collections of fugitive emissions</i> components at each wellsite.</p> <p>(g) The frequency of the recordkeeping period may be altered upon receipt of Departmental approval.</p> | <p>Rule 335-3-16-.05(c)(2), Rule 335-3-14.04 [Anti-PSD]
Rule 335-3-1-.04</p> <p>Rule 335-3-16-.05(c)(2), Rule 335-3-14.04 [Anti-PSD], & Rule 335-3-1-.04</p> <p>Rule 335-3-16-.05(c)(2), Rule 335-3-14.04 [Anti-PSD]
Rule 335-3-1-.04</p> <p>Rule 335-3-16-.05(c)(2), Rule 335-3-1-.04, & 40 CFR 60.5420a</p> <p>Rule 335-3-16-.05(c)(2) &
Rule 335-3-1-.04</p> |
| <p>2. Periodic Monitoring Reports meeting the requirements specified in proviso 2(a) through (c) of this section of this subpart shall be submitted to the Department.</p> <p>(a) Each report shall identify each incidence of deviation from a permit term or condition including those that occur during startups, shutdowns, and malfunctions. A deviation shall mean any instance in which emission limits, emission standards, and/or work practices were not complied with, as indicated by observations, data collection, and monitoring specified in this permit.</p> | <p>Rule 335-3-16-.05(c)(2), Rule 335-3-16-.05(c)(3)(i), Rule 335-3-14-.04 [Anti-PSD]</p> |

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Federally Enforceable Provisos	Regulations
<p>(b) A summary of monthly measurements and calculations required by <i>Recordkeeping and Reporting Requirements</i> provisos 1(b) shall be included in all reports</p> <p>(c) Reports shall be semiannual and submitted on the following schedule, or as otherwise approved by the Department: <i>Reporting Period: Jan. 1 – June 30</i> <i>Submitted by: July 31</i> <i>Period: July 1 – Dec. 31</i> <i>by: Jan. 31</i></p>	<p>Rule 335-3-14-.04 [Anti-PSD]</p>
<p>3. An Annual LDAR Report should be submitted to the Department and EPA as follows:</p> <p>(a) Report shall include copy of each fugitive emissions survey performed within the reporting period.</p> <p>(b) Each Annual LDAR report shall include the information listed in §60.5420a(b)(1) & (7)(i)-(xii). If an applicable well completion operation occurred in the reporting period, the report shall also include the information listed in §60.5420a(b)(2)</p> <p>(c) LDAR reports shall be annual and submitted to the Department by mail and to EPA by their CEDRI website (https://cdx.epa.gov/) as per §60.5420a(b)(11) on the following schedule or as otherwise approved by the Department: <i>Reporting Period: Jan. 1 – Dec. 31</i> <i>Submission Date: March 30</i></p>	<p>40 CFR §60.5420a</p>
<p>4. Each deviation from the requirements, including those that occur during start ups, shut downs, and malfunctions, shall be reported to the Department in a manner that complies with proviso 15(b) and 21(b) of the <i>General Provisos</i> subpart of this permit.</p>	<p>Rule 335-3-16-.05(c)(3)(ii)</p>

Appendix A: Facility Engine Monitoring

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Each Facility Engine

Monitoring approach:	<i>Periodic monitoring</i>										
I. Indicator	Calculated Pollutant emissions in lb/hr & Ton/12-months										
A. Measurement approach	<p>Fuel gas volume to each unit shall be monitored with a system capable of measuring and recording the flow rate and/or the parameters utilized for flow rate calculation.</p> <p>BTU & H₂S content of fuel gas stream shall be determined annually, or at a frequency determined by the Department.</p> <p>NO_x & CO emission factors were determined during the initial performance tests for each engine.</p> <p>VOC emission factors shall be either manufacturer's emission factors or AP-42 factors.</p>										
II. Indicator range	Pollutant Emissions shall be maintained at < = to the limits listed in the following table:										
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Emission Point</u></th> <th style="text-align: center;"><u>Unit Rating (BHP)</u></th> <th style="text-align: center;"><u>NO_x (lb/hr)</u></th> <th style="text-align: center;"><u>CO (lb/hr)</u></th> <th style="text-align: center;"><u>VOC (lb/hr)</u></th> </tr> </thead> <tbody> <tr> <td>0311B</td> <td style="text-align: center;">163</td> <td style="text-align: center;">1.00</td> <td style="text-align: center;">2.00</td> <td style="text-align: center;">0.7</td> </tr> </tbody> </table>	<u>Emission Point</u>	<u>Unit Rating (BHP)</u>	<u>NO_x (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>	0311B	163	1.00	2.00	0.7
<u>Emission Point</u>	<u>Unit Rating (BHP)</u>	<u>NO_x (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>							
0311B	163	1.00	2.00	0.7							
A. QIP threshold	<p>A deviation is defined as anytime the calculated emission rate exceeds the respective allowed emission rates.</p> <p>A deviation triggers an immediate inspection, corrective action, and reporting within 48 hours or two work days.</p> <p>Not applicable</p>										
III. Performance criteria											
A. Data representiveness	<p>Fuel gas volume monitor shall be located immediately upstream of the engine.</p> <p>Fuel gas BTU & H₂S content shall be determined from samples that are representative of the fuel gas being consumed.</p> <p>Performance tests shall be undertaken while engine is being operated at normal loads.</p>										
B. Verification of operational status	Not applicable										
C. QA/QC practices & criteria	<p>The fuel gas volume monitor shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide adequate assurance that the device is calibrated accurately, or at least annually whichever is more frequent.</p> <p>If the fuel gas monitor fails its calibration tests, the fuel gas monitor shall be taken out of service until repairs and/or replacements are made and a new calibration test is undertaken and passed.</p>										
D. Monitoring frequency	Fuel gas volume measured continuously.										

Each Facility Engine

Monitoring approach:	<i>Periodic monitoring</i>
Data collection procedure	<p>Fuel gas BTU content shall be determined annually, or at a frequency set by the Department.</p> <p>Performance tests shall be undertaken utilizing the following applicable methods outlined in proviso 2 of the <i>compliance & performance test methods & procedures</i> as: (1) required by the Department, (2) as necessary to demonstrate compliance, or (3) as required by 40 CFR Part 60 Subpart JJJJ.</p> <p>Calculate: Monthly, or as set by the Department,</p> <p style="padding-left: 40px;">Pollutant emissions in lb/hr & Ton/12-months, while utilizing the fuel volume, BTU content, emission factor and operating hours</p> <p style="padding-left: 40px;">Fuel gas volume consumed</p> <p style="padding-left: 40px;">Equations listed in proviso 1 of the <i>recordkeeping & reporting</i> section of the Facility Engines subpart of this permit shall be utilized in the pollutant emissions calculations.</p> <p>Record: Monthly, or as set by the Department</p> <p style="padding-left: 40px;">Fuel gas volume consumed, Hours of operation, & Pollutant emissions</p> <p>Record: Each occurrence</p> <p style="padding-left: 40px;">Fuel gas BTU & H₂S content determination</p> <p style="padding-left: 40px;">Time, date and results of each inspection and corrective actions taken</p>
Averaging period	Monthly, or as set by the Department, & Rolling 12-months

Appendix B: Each Well Flare Monitoring

Each Well Flare

Monitoring approach:	<i>Compliance Assurance Monitoring [CAM]</i>	<i>Periodic Monitoring</i>
I. Indicator	Operate flare with a flame present at all times when a process gas stream may be sent to it.	Total well flare emissions
A. Measurement approach	The flare tip shall be equipped with a continuously burning pilot light that is monitored with either a thermocouple or an equivalent device or by visual observation.	Each flares' gas volume shall be monitored with a system capable of measuring and recording the flow rate and/or the parameters utilized for flow rate calculation or estimated utilizing material balances, computer simulations, special testing, etc.
II. Indicator range	Presence of a flame at flare tip	The total facility emissions for any criteria pollutant on a ton-per-12-months basis, calculated monthly, shall not exceed 245 TPY.
	A deviation is defined as when there was no flame present at the flare tip when a process gas stream was vented to it. A deviation triggers an immediate inspection and corrective actions that meet the requirements of 40 CFR Part 64.7(d) and reporting within 48 hours or two work days.	A deviation is defined as when the rolling 12-month average of any criteria pollutant exceeds 245 TPY for the facility, including flare emissions. A deviation triggers an immediate inspection, corrective action, and reporting within two work days.
A QIP threshold	If the accumulated hours of deviation events occurring exceeds 5% of the flare's operating time during any quarterly reporting period, a Quality Improvement Plan shall be developed and implemented.	Exceeding 225 TPY of any criteria pollutant for the facility, including well emissions, is not a deviation but triggers a report to the Department within two work days indicating how the Permittee intends to avoid exceeding 245 TPY the next month. Not applicable
III. Performance criteria		
A. Data representiveness	The flame monitor shall be located at the flare tip and focused on the area where gas exits the flare tip. Visual observations shall be made from the location that provides the best view of the flare tip and/or flare pilot lights or flare igniter.	Flare gas volume monitors shall be located immediately upstream of each flare, and material balances shall be performed utilizing this. Provided multiple streams share a common flare, the flare gas volume monitor may be placed at this point.
B. Verification of operational status	Not applicable	Not applicable
C. QA/QC practices & criteria	The flame monitor shall be maintained and calibrated in accordance with the manufacturer's specifications, other	Each volume monitor shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written

Each Well Flare

Monitoring approach:	<i>Compliance Assurance Monitoring [CAM]</i>	<i>Periodic Monitoring</i>
	<p>written procedures that provide adequate assurance that the device is properly maintained and calibrated accurately, or at least annually whichever is more frequent..</p> <p>Repairs and/or replacements shall be made immediately when non-functioning or damaged parts are found.</p>	<p>procedures that provide adequate assurance that the device is calibrated accurately, or at least annually, whichever is more frequent.</p> <p>If the flare gas volume monitor fails its calibration tests, the volume monitor shall be taken out of service until repairs and/or replacements are made and a new calibration test is undertaken and passed.</p>
D. Monitoring frequency	Pilot flame shall be monitored either continuously with a thermocouple or daily with visual inspections if operating staff is on site.	Flare gas production volumes shall be monitored continuously.
Data collection procedure	<p>Record time, date and duration of each incident of when no flame was present at the flare tip when a process gas stream was sent to it.</p> <p>Record time, date and results of each visual observation.</p> <p>Record time, date and results of each calibration.</p> <p>Record: Each Occurrence:</p> <p style="padding-left: 40px;">Date and results of each inspection and corrective actions taken.</p>	<p>Record: Daily</p> <p style="padding-left: 40px;">Well gas flared volume (in Mscf/Day)</p> <p style="padding-left: 40px;">Total gas volume sold [in MMScf/Day]</p> <p>Record: Each Occurrence:</p> <p style="padding-left: 40px;">Date and results of each inspection and corrective actions taken.</p>
Averaging period	Instantaneous	Daily

Appendix C: Opacity Monitoring

Opacity Monitoring

Monitoring approach:	<i>Periodic Monitoring</i>
I. Indicator	Opacity
A. Measurement approach	<p>Provided a flare or any fuel-burning unit is being utilized, a daily visual inspection of that unit shall be undertaken wherein facility personnel shall observe the unit for any visible emissions.</p> <p>Should any visible emissions be observed from that unit, a subsequent visible emissions observation shall be undertaken. The duration of each observation shall be ≥ 15 minutes and ≤ 60 minutes.</p>
II. Indicator range	<p>(1) No more than one 6-min. average opacity reading shall exceed 20%; OR, (2) No 6-min. average opacity reading shall exceed 40%; OR, (3) The accumulated time of observed visible emissions shall not exceed 12 minutes.</p> <p>A deviation is defined as anytime the observed 6-minute average opacity exceeds 20% for the 2nd time, or 40% for the 1st time, when utilizing Method 9.</p> <p>A deviation triggers continued visible emissions observations at a frequency suitable to defining the duration of the visible emission deviation event. One observation shall be undertaken to establish the end of the visible emission deviation event.</p> <p>A deviation triggers an immediate inspection, corrective action, and reporting within 48 hours or two work days.</p>
III. Performance criteria	
A. Monitoring frequency	Daily
Data collection procedure	<p>Record: Daily</p> <p>Each 15 second observation reading</p> <p>Record: Each occurrence – Time, date and results of corrective actions taken</p>
Averaging period	Six minutes