



# SYNTHETIC MINOR OPERATING PERMIT

**PERMITTEE:** URBAN OIL AND GAS GROUP, LLC  
**FACILITY NAME:** WHITE OAK CREEK EAST SCREW COMPRESSOR STATION  
**LOCATION:** OAKMAN, WALKER COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE OR DEVICE
414-0021-X007	1,025 hp Waukesha L7042G, 4-Stroke, Rich-Burn Natural Gas-fired Reciprocating Engine Controlled by a Catalytic Converter (NESHAP ZZZZ)

*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 there under, 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.*

**ISSUANCE DATE:** Draft

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Alabama Department of Environmental Management

1. 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.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
5. 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.
6. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
7. This process, including 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.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.

9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.
10. Submittal 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 stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. Unless otherwise stated in this permit or an applicable regulation, the Air Division must be notified in writing at least 10 working 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.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) 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.
- (b) 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 procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

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.

14. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.
15. 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.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

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:

- (a) 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;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

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.

17. Precautions shall be taken by the permittee and its personnel to ensure that no person shall ignite, cause to be ignited, permit to be ignited, or maintain any open fire in such a manner as to cause the Department's rules and regulations applicable to open burning to be violated.
18. In accordance with ADEM Admin. Code. r. 335-3-4-.01(1), 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 shall be determined by 40 CFR Part 60, Appendix A, Method 9.

19. 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.
20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

#### **Synthetic Minor Source Requirements**

21. The permittee shall not cause or allow nitrogen oxide (NO<sub>x</sub>) emissions from this engine to exceed 4.52 lb/hr as measured by EPA Reference Method 7E. Alternate methods may be used provided prior approval is granted by the Air Division.
22. The permittee shall not cause or allow carbon monoxide (CO) emissions from this engine to exceed 6.78 lb/hr as measured by EPA Reference Method 7E. Alternate methods may be used provided prior approval is granted by the Air Division.
23. This unit shall be equipped and operated at all times with a non-selective catalytic reduction (NSCR) device in order to comply with the applicable emission limits of this permit. The permittee shall not operate the engine without an active catalyst installed.
24. Should this engine exceed any emission standard or operational limitation, at any time, the permittee shall notify the Air Division within two working days of determining that the exceedance occurred.

#### **National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ**

25. The permittee shall comply with the applicable requirements of the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ, and the General Provisions of Subpart A. This engine is classified as an existing non-emergency, non-black start 4SRB stationary RICE greater than 500 hp located at an area source of HAP emissions. Depending upon whether this engine meets the definition of a “remote stationary RICE” as defined in 40 CFR §63.6675, the applicable requirements include, but may not be limited to, the following:
  - (a) During any period this engine meets the definition of a remote stationary RICE or during the 12-month period following the permittee’s determination that the engine no longer meets the definition of a remote stationary RICE, the permittee shall comply with the following:
    - i. *Management Practices and Other Requirements* (40 CFR §63.6603 and Table 2d to Subpart ZZZZ)

- A. Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes;
  - B. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;
  - C. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary;
  - D. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and
  - E. Evaluate the status of this engine as a remote stationary RICE every 12-months. If the evaluation indicates that this engine no longer meets the definition of remote stationary RICE in 40 CFR §63.6675, the permittee shall comply with all of the requirements for existing non-emergency, non-black start 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE within 1 year of the annual evaluation.
- ii. *Compliance Requirements* (40 CFR §63.6640 and Table 2d to Subpart ZZZZ)
- A. Operate and maintain this unit according to the manufacturer's emission-related written instructions; or,
  - B. Develop and follow a maintenance plan that provides for, to the extent practicable, the maintenance and operation of the engine in a manner consistent with good air pollution control practices for minimizing emissions.
- iii. *Recordkeeping* (40 CFR §63.6603(f), 40 CFR §63.6655, and 40 CFR §63.6660)
- A. Maintain on-site for the life of the engine either a copy of the manufacturer's emission-related operation and maintenance instructions for each unit or the maintenance plan developed in accordance with 40 CFR §63.6640;
  - B. Maintain records of the maintenance conducted on this engine;
  - C. Maintain records of the initial and annual evaluation of the status of this engine as a remote stationary RICE; and
  - D. Maintain all required records in a form suitable and readily available for expeditious review for a period of 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

- (b) During any period that this engine does not meet the definition of a remote stationary RICE (except during the 12-month period following the permittee's determination that the engine no longer meets the definition of a remote stationary RICE), the permittee shall comply with the following:
- i. *Equipment Standard and Other Requirements.* In accordance with 40 CFR §63.6603 and Table 2d to Subpart ZZZZ, the permittee shall:
    - A. Install a non-selective catalytic reduction (NSCR) device to reduce HAP emissions from this engine; and
    - B. Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.
  - ii. *Initial Compliance Requirements.* In accordance with 40 CFR §63.6630 and Table 5 to Subpart ZZZZ, the permittee shall:
    - A. Except as provided by 40 CFR §63.6612(b), within 180 days after the applicable compliance date, conduct an initial performance test in accordance with 40 CFR §63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, **or** the average concentration is less than or equal to 270 ppmvd at 15 percent O<sub>2</sub>; or the average reduction of emissions of THC is 30 percent or more and **either**
    - B. No later than the applicable compliance date, install and operate a CPMS to continuously monitor catalyst inlet temperature according to the requirements in 40 CFR §63.6625(b); **or**
    - C. No later than the applicable compliance date, install and operate equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.
  - iii. *Continuous Compliance Requirements.* In accordance with 40 CFR §63.6640 and Table 6 to Subpart ZZZZ, the permittee shall continuously comply with the following:
    - A. Conduct annual compliance demonstrations as specified in 40 CFR §63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, or the average concentration is less than or equal to 270 ppmvd at 15 percent O<sub>2</sub>; or the average reduction of emissions of THC is 30 percent or more and **either**
    - B. Collect the catalyst inlet temperature data according to 40 CFR §63.6625(b); reduce these data to 4-hour rolling averages; and maintain the 4-hour rolling averages within the limitation of greater than 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; **or**

- C. Immediately shut down the engine if the catalyst inlet temperature exceeds 1250 °F.
  - D. If the results of the annual compliance demonstration show that the emissions exceed the applicable average reduction/concentration for CO or THC, the permittee shall shut down the stationary RICE as soon as safely possible, and appropriate corrective action shall be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The permittee shall retest the stationary RICE within 7 days of being restarted. If the retest shows that the emissions continue to exceed the specified levels, the permittee shall again shut down the stationary RICE as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the permittee demonstrates through testing that the emissions meet the applicable average reduction/concentration for CO or THC.
- iv. *Monitoring and Maintenance Requirements.*
- A. If the permittee chooses to utilize a continuous parameter monitoring system (CPMS) to monitor the catalyst inlet temperature:
    - (1) The permittee shall operate and maintain the CPMS according to the requirements in 40 CFR §63.6625(b);
    - (2) Except as provided in 40 CFR §63.6635, the permittee shall monitor the catalyst inlet temperature continuously at all times that the engine is operating;
    - (3) In accordance with 40 CFR §63.6640 and Table 6 to Subpart ZZZZ, the permittee shall reduce the catalyst inlet temperature data to 4-hour rolling averages. Each 4-hour rolling average shall be immediately calculated at the end of each rolling 4-hour period;
    - (4) The permittee shall not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. The permittee shall, however, use all the valid data collected during all other periods.
  - B. The permittee shall operate and maintain the engine and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop its own maintenance plan which shall provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
- (c) *Notifications.* The permittee shall submit the notifications required by 40 CFR §63.6645, which include but may not be limited to the following:



- i) *Initial Notification.* The permittee shall submit an Initial Notification to the EPA Administrator within 120 days of installing the engine. The notification shall contain the information in 40 CFR §63.9(b)(2). If the engine changes status from a remote stationary RICE to a non-remote stationary RICE, the permittee shall submit another Initial Notification to the EPA Administrator and the Air Division within 120 days of determining the engine's change in status.
- ii) *Notification of Performance Test.* If this engine is/becomes subject to the requirement to conduct an initial performance test, the permittee shall notify the EPA Administrator and the Air Division in writing of the intention to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin. The notification shall include the site-specific test plan (test protocol) required under 40 CFR §63.7(c). For the initial performance test, the notification shall also include the site-specific performance evaluation test plan for the CPMS as required by 40 CFR §63.8, if a CPMS is being utilized.
- iii) *Notification of Compliance Status.* If this engine is/becomes subject to the requirement to conduct an initial performance test, the permittee shall submit a Notification of Compliance Status to the EPA Administrator and the Air Division no later than 60 days following the completion of the initial performance test. The notification shall be signed by the responsible official who shall certify its accuracy, attesting to whether the source has complied with the relevant standard. The notification shall include:
  - (1) The results of the performance test and CPMS performance evaluation (if applicable);
  - (2) The catalyst inlet temperature data collected during the performance test;
  - (3) The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods;
  - (4) The type and quantity of hazardous air pollutants emitted by the source (or surrogate pollutants if specified in the relevant standard), reported in units and averaging times and in accordance with the test methods specified in the relevant standard;
  - (5) An analysis demonstrating whether the affected source is a major source (using the emissions data generated for this notification);
  - (6) A description of the air pollution control equipment (or method), including the control efficiency (percent) for the control device (or method); and
  - (7) A statement by the permittee as to whether the source has complied with the relevant standard or other requirements.
- (8) As required by 40 CFR §63.6620(i), a written report of the average percent load determination. The engine percent load during a performance test shall be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. The

following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accuracy in percentage of true value must be provided.

- (d) *Records.* In accordance with 40 CFR §63.6655(a) the permittee shall keep records of each notification and documentation supporting any initial notification or notification of compliance, records of occurrence and duration of each malfunction of air pollution control and monitoring equipment, records of performance tests and performance evaluations, records of actions taken during periods of malfunction to minimize emissions including actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. The permittee shall also keep records of the maintenance conducted on the stationary RICE and after-treatment control device (if any) in order to demonstrate that the RICE is operated and maintained in accordance with the permittee's maintenance plan.
- (e) *Reports.* If this engine is/becomes subject to the requirement to install an oxidation catalyst, the permittee shall submit a Compliance Report semiannually in accordance with the requirements of 40 CFR §63.6650 and Table 7 of Subpart ZZZZ. The permittee shall submit Semiannual Compliance Reports to the EPA Administrator and the Air Division no later than January 31<sup>st</sup> and July 31<sup>st</sup> of each year for the semiannual reporting periods of January 1 through June 30<sup>th</sup> and July 1<sup>st</sup> through December 31<sup>st</sup>, respectively. No report shall be required for any semiannual period in which no annual compliance demonstration is conducted.