

SPECIAL CONDITIONS

Permit Number 9635

EMISSION STANDARDS AND OPERATING REQUIREMENTS

1. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in that attached table.
2. The 1,100-horsepower (hp) Ingersoll-Rand Rich Burn Engine (Emission Point No. [EPN] 6A) shall meet 2.0 grams carbon monoxide (CO) per brake horsepower-hour (bhp-hr) or less. The 1,396-hp Dresser-Rand Lean Burn Engine (EPN 6B) shall meet 2.5 grams CO/bhp-hr or less. Both engines shall meet 1.5 grams oxides of nitrogen (NO_x) per bhp-hr and 1.0 grams VOC/bhp-hr or less. (4/07)
3. All waste gases generated from this facility must be burned in the incinerator specified in the permit application. It is not permissible under any conditions to vent the waste gases directly to the atmosphere, except for (1) engine exhausts, (2) carbon dioxide (CO₂) vent, and (3) the incinerator exhaust. (4/07)
4. Safety relief valves that discharge to the atmosphere are exempt from the requirements of Special Condition No. 3, provided they are equipped with a rupture disc upstream of the valve. A pressure gauge shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown. The following valves are exempt from the requirements of this special condition: (4/07)

<u>Valve No.</u>	<u>Service</u>
PSV-4	P-301
PSV-1	V-300
PSV-9	V-308

5. During replacement of iron oxide impregnated chips, the iron sponge unit shall be isolated from the gas plant and shall be depressurized by venting either to the incinerator or through the plant for processing. The spent iron chips being removed from the iron sponge unit shall be promptly disposed of to avoid spontaneous ignition and to prevent an odor nuisance. (4/07)
6. Sampling ports and platform(s) shall be incorporated into the design of the incinerator and CO₂ vent stacks according to the specifications set forth in the document entitled "Chapter 2, Stack Sampling Facilities." Alternate sampling facility designs may be submitted for approval to the TCEQ Houston Regional Director. (4/07)

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7. Carbon Compound Waste Gas Streams

Except as may be provided for in Special Condition Nos. 3 and 4, all waste gas from point sources containing volatile organic compounds and/or other organic compounds (hydrocarbons and/or hydrocarbon derivatives excluding carbon dioxide) shall be routed to an incinerator. The incinerator shall operate with no less than 99.5 percent efficiency in disposing of the waste gas. The incinerator firebox temperature shall be a minimum of 1300° F during normal operation.

The waste gas streams shall include process vents, relief valves, analyzer vents, steam jet exhausts, upset emissions, start-up and shutdown-related emissions or purges, blowdowns, or other system emissions of waste gas. Storage tank vents, cooling tower exhaust, and process fugitive emissions are excluded from this requirement. Any other exception to this condition requires prior review and approval by the Executive Director, and such exceptions may be subject to strict monitoring requirements. **(4/07)**

8. Sweet natural gas or sales gas shall be used to fire each compressor engine. Fuel gas usage shall be monitored and recorded and tabulated on a monthly basis. Records may be recorded electronically. **(4/07)**
9. Opacity of emissions from the facilities must not exceed 5 percent averaged over a six-minute period, except for those periods described in Title 30 Texas Administrative Code (30 TAC) § 111.111(a)(1)(E). **(4/07)**

DEMONSTRATION OF COMPLIANCE

10. If requested in writing by the TCEQ Houston Regional Director or the TCEQ Executive Director, the holder of this permit shall perform sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted to the atmosphere by the CO₂ Absorber vent (EPN 4), either engine (EPNs 6A or 6B), or the incinerator (EPN 7). The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. **(6/10)**
 - A. The TCEQ Houston Regional Office shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting.

The notice shall include:

- (1) Date for pretest meeting.
- (2) Date sampling will occur.
- (3) Name of firm conducting sampling.
- (4) Type of sampling equipment to be used.
- (5) Method or procedure to be used in sampling.

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The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

A written proposed description of any deviation from sampling procedures specified in permit conditions or TCEQ or Environmental Protection Agency sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director or the Director of the TCEQ Office of Permitting and Registration, Air Permits Division shall approve or disapprove of any deviation from specified sampling procedures.

Requests to waive testing for any pollutant specified in B of this condition shall be submitted to the TCEQ Air Permits Division.

- B. Air contaminants and stack parameters to be tested for shall be determined by the TCEQ, and may include (but are not limited to) vent gas velocity, nitrogen oxides, particulate matter, carbon monoxide, VOC, HCl, and incinerator VOC. (6/10)
- C. Sampling shall occur within 60 days after requested by the TCEQ. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office.
- D. Testing shall be performed at rated maximum output for engines and at normal operating conditions for other sources.
- F. One copy of the final sampling report shall be forwarded to the TCEQ Houston Regional Office within 60 days after sampling is completed. The sampling report shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual.

CONTINUOUS DETERMINATION OF COMPLIANCE

- 11. In order to demonstrate that emission limits specified in the maximum allowable emissions rate table and Special Condition No. 2 are continuously met, the holder of this permit shall perform the following: (4/07)
 - A. Conduct evaluations of engine performance every three months (quarterly) at 90 percent or greater of rated power output by measuring the NO_x, carbon monoxide (CO), and oxygen content of the exhaust. Testing required under this special condition shall begin within 90 days of permit issuance. If an engine does not operate during a quarter, it does not need to be sampled for that quarter.

Results of the quarterly engine performance evaluations shall be sent the TCEQ Houston Regional Office within 90 days of the completion of the sampling of engine exhaust. If maintenance is performed on an engine after evaluation and the engine is re-evaluated, the results of the initial engine evaluation shall also be reported. (6/10)

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The use of portable analyzers specifically designed for measuring the concentration of each contaminant in parts per million by volume is acceptable for these evaluations. A hot air probe or equivalent shall be used with portable analyzers to prevent error in results due to high exhaust gas temperatures. Three sets of measurements shall be averaged to determine the concentrations. Prior to the first measurement and following the last measurement, the portable analyzer shall be checked for accuracy using an audit gas that conforms to the specifications in Title 40 Code of Federal Regulations Part 60, Appendix F, § 5.1.2(3).

Any other method approved by the appropriate Texas Commission on Environmental Quality (TCEQ) Regional Director or the TCEQ Air Permits Division in Austin is also acceptable.

- B. If the portable analyzer is capable of measuring nitric oxide and nitrogen dioxide (NO₂), then these measurements shall be summed to determine the NO_x emission rate. The NO_x emission rate shall be expressed as (using the molecular weight of) NO₂.

Emissions shall be measured and recorded in the as-found operating condition, except no compliance determination shall be established during start-up, shutdown, or under breakdown conditions.

- C. Emissions calculations shall be used to convert the portable analyzer data to pound per hour NO_x and CO on a quarterly basis for each engine.

RECORDKEEPING

12. The following written records demonstrating compliance shall be made and maintained by the holder of this permit and shall be made immediately available upon request to designated representatives of any local air pollution control agency, the TCEQ, and the U.S. Environmental Protection Agency. (4/07)

- A. Records to be kept on a five-year rolling retention basis:

- (1) Records of fuel usage to demonstrate compliance with Special Condition No. 8.
- (2) Records of emissions testing to demonstrate compliance with Special Condition No. 11.
- (3) Date, start time, end time, and description of any engine maintenance. (6/10)
- (4) Records of pressure gage readings to demonstrate compliance with Special Condition No. 4. (6/10)
- (5) Records of the incinerator firebox temperature readings to demonstrate compliance with Special Condition No. 7. (6/10)

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- (6) Records of opacity readings taken by facility personnel to demonstrate compliance with Special Condition No. 9. **(6/10)**

B. Records to be kept on a permanent basis:

- (1) A copy of the latest version of this permit.
- (2) A copy of the latest sampling report for each EPN for which sampling has been done, to demonstrate compliance with Special Condition No. 10.
- (3) A copy of the latest permit amendment application and subsequent representations submitted to the TCEQ.
- (4) A copy of the latest permit renewal application and subsequent representations submitted to the TCEQ.

Dated: June 21, 2010

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

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This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
4	CO ₂ Absorber Vent	VOC	15.23	66.7
6A	IR Compressor Engine A	NO _x	3.64	16.0
		CO	4.85	21.3
		VOC	2.43	10.7
		PM ₁₀	0.23	1.1
		SO ₂	0.01	0.03
6B	IR Compressor Engine B	NO _x	4.62	20.3
		CO	7.69	33.7
		VOC	3.07	13.5
		PM ₁₀	0.12	0.6
		SO ₂	0.01	0.03
7	Incinerator	NO _x	0.21	1.0
		CO	0.18	0.8
		VOC	0.48	2.2
		PM ₁₀	0.02	0.1
		SO ₂	0.01	0.01
		HCl	2.24	9.9
10	Fugitives (4)	VOC	0.12	0.6
11	Storage Tank	VOC	0.1	0.1

- (1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
- (2) Specific point source names. For fugitive sources, use an area name or fugitive source name.

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

- (3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1.
- NO_x - total oxides of nitrogen
- SO₂ - sulfur dioxide
- PM - particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}
- PM₁₀ - particulate matter equal to or less than 10 microns in diameter
- PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
- CO - carbon monoxide
- HCl - hydrogen chloride
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

_____ Hrs/day _____ Days/week _____ Weeks/year or 8,760 Hrs/year

** Compliance with annual emission limits is based on a rolling 12-month period.

Dated: June 21, 2010