

Attachment #1  
**AIR PERMIT**  
FOLDER LEVEL

AIR PA #: HG0234M 047937

File Type: PERMITS

Volume: 001

Inclusive Dates: 1/1/2001 - 12/31/<sup>2001</sup>~~2004~~

Media Code/ Form

- Microfiche
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- Electronic Image

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TEXAS AIR CONTROL BOARD  
PERMIT APPLICATION SUMMARY

DATE: 10-22-01  
TIME: 11:33:57

PAGE: 1  
Air pa | HG-0234-M / 47937/PA

\*\*\*GENERAL PERMIT INFORMATION

PERMIT: 47937 ENGR: HEARNS, DARIO J. / GROUP: PBRT ID:HG0234M  
ISSUED TO: EXXON MOBIL CORPORATION  
UNIT NAME: CLEAR LAKE GAS PLANT  
OPERATING SCHEDULE: 24.0 HRS/DAY 7 DAYS/WK 52 WKS/YR  
LAT: 29-30-00 LONG: 094-54-30 REGION: 12 COUNTY: HARRIS  
NEAR CITY: PASADENA LOC: 5120 GENOA RED BLUFF RD

\*\*\*PERMIT/SITE CONTACT INFORMATION:

PERSON: MR ROLAND L MOREAU ADDR1: PO BOX 4358  
TITLE: REGULATORY COMPLIANCE SUPER ADDR2:  
CITY: HOUSTON STATE: TX ZIP: 77210 PHONE: (713)431-1221

\*\* CONSTRUCTION \*\*

\*\* OPERATING \*\*

\*\* CONTINUANCE \*\*

TYPE APPL(C,S,X): (X) OPERATION START : NOTICE MAILED :  
APPL RECD : 05-10-01 OPER APPL RECD : APPL RECD :  
DEFIC LTR SNT : OPER APPL CMPLT : DEFIC LTR SNT :  
SUPP INFO REQ : DISP(I,D): ( ) SUPP INFO REQ :  
SUPP INFO RECD : OPR TYPE(R,S) : ( ) SUPP INFO RECD :  
APPL CMPLT : \*\*\*\*\* APPL CMPLT :  
COMP LTR SNT : \* \* COMP LTR SNT :  
PUB NTC SNT : \* I= ISSUED D=DENIED \* PUB NTC SNT :  
PUB NTC PUB : \* E=EXPIRED \* PUB NTC PUB :  
PUB HEAR (R,H) : ( ) \* C=CNST S=SPECIAL \* PUB HEAR(R,H) : ( )  
CNST TYPE(C,X,S): (X) \* X=EXEMPT R=OPER \* DISP(I,D,E):( ) :  
DISP (I) : 06-28-01 \*\*\*\*\*  
CNST START DATE :

\*\*\*EMISSIONS CHANGED :

\*\*\*REMARKS:PAM

\*\*\*OTHER PERMIT DATES:

APP/PERMIT VOIDED: REASON: VOID/HOLD CODES: PD-PLT DISMANTLED  
APP ON HOLD UNTIL: REASON: CR-COMPANY REQUEST TI-TIME EXPIRED  
CONST STOPPED UNTIL: DD-DATA DELAY TD-TECH DIFFICULTY  
RE-REISSUED NR-NO RESPONSE

\*\*\*PERMIT TYPES/STANDARDS:

NEW MAJ SOURCE:> 100 TPY: SIC: 1321  
MAJOR MODIFICATION: PORTABLE: RELATED PERMITS: SUFFIX REASON  
NON-ATTAIN REVIEW: NSPS: TACB: CHG LOC:  
INSIGNIFICANT EMISSIONS: NESHAP: PSD-TX: CHG OWN:  
FUEL CONVERSION: TOXIC MATERIALS: STD EX NO.:

\*\*\*AIR CONTAMINANT INFORMATION:

NAME	CODE	MAX ALLOWABLE RATE LBS/HR	TONS/YR	ACTUAL TONS/YR
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\*\*\*ABATEMENT EQUIPMENT:

TEXAS AIR CONTROL BOARD  
PERMIT APPLICATION SUMMARY

DATE: 05-10-01  
TIME: 18:30:13

PAGE: 1

\*\*\*GENERAL PERMIT INFORMATION

PERMIT: 47937 ENGR: UKANDU, EMMANUEL / GROUP: PBRT ID:HG0234M  
ISSUED TO: EXXON MOBIL CORPORATION  
UNIT NAME: CLEAR LAKE GAS PLANT  
OPERATING SCHEDULE: 24.0 HRS/DAY 7 DAYS/WK 52 WKS/YR  
LAT: 29-30-00 LONG: 094-54-30 REGION: 12 COUNTY: HARRIS  
NEAR CITY: PASADENA LOC: 5120 GENOA RED BLUFF RD

\*\*\*PERMIT/SITE CONTACT INFORMATION:

PERSON: W J TAYLOR ADDR1: PO BOX 4358  
TITLE: DIVISION STAFF ENGINEER ADDR2:  
CITY: HOUSTON STATE: TX ZIP: 77210 PHONE: (713)431-1222

\*\* CONSTRUCTION \*\*

TYPE APPL(C,S,X): (X)  
APPL RECD : 05-10-01  
DEFIC LTR SNT :  
SUPP INFO REQ :  
SUPP INFO RECD :  
APPL CMPLT :  
COMP LTR SNT :  
PUB NTC SNT :  
PUB NTC PUB :  
PUB HEAR (R,H) : ( )  
CNST TYPE(C,X,S) : ( )  
DISP ( ) :  
CNST START DATE :

\*\* OPERATING \*\*

OPERATION START :  
OPER APPL RECD :  
OPER APPL CMPLT :  
DISP(I,D) : ( )  
OPR TYPE(R,S) : ( )  
\*\*\*\*\*  
\* I= ISSUED D=DENIED \*  
\* E=EXPIRED \*  
\* C=CNST S=SPECIAL \*  
\* X=EXEMPT R=OPER \*  
\*\*\*\*\*

\*\* CONTINUANCE \*\*

NOTICE MAILED :  
APPL RECD :  
DEFIC LTR SNT :  
SUPP INFO REQ :  
SUPP INFO RECD :  
APPL CMPLT :  
COMP LTR SNT :  
PUB NTC SNT :  
PUB NTC PUB :  
PUB HEAR(R,H) : ( )  
DISP(I,D,E):( ) :

RECEIVED  
MAY 15 2001  
REGION 12

\*\*\*EMISSIONS CHANGED :

\*\*\*REMARKS:PAM

\*\*\*OTHER PERMIT DATES:

APP/PERMIT VOIDED:  
APP ON HOLD UNTIL:  
CONST STOPPED UNTIL:

VOID/HOLD CODES:

REASON: PD-PLT DISMANTLED  
REASON: CR-COMPANY REQUEST TI-TIME EXPIRED  
REASON: DD-DATA DELAY TD-TECH DIFFICULTY  
RE-REISSUED NR-NO RESPONSE

\*\*\*PERMIT TYPES/STANDARDS:

NEW MAJ SOURCE:> 100 TPY: SIC: 1321  
MAJOR MODIFICATION: PORTABLE: RELATED PERMITS: SUFFIX REASON  
NON-ATTAIN REVIEW: NSPS: TACB: CHG LOC:  
INSIGNIFICANT EMISSIONS: NESHAP: PSD-TX: CHG OWN:  
FUEL CONVERSION: TOXIC MATERIALS: STD EX NO.:

\*\*\*AIR CONTAMINANT INFORMATION:

NAME CODE MAX ALLOWABLE RATE ACTUAL  
LBS/HR TONS/YR TONS/YR

\*\*\*ABATEMENT EQUIPMENT:



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION  
FORM PI-7

REGISTRATION FORM FOR EXEMPTIONS and PERMITS BY RULE

Please mail to: Texas Natural Resource Conservation Commission, Office of Permitting, Remediation, and Registration, Air Permits Division, MC-162, P.O. Box 13087, Austin, Texas 78711-3087

I. APPLICANT INFORMATION

Company Name: Exxon Mobil Corporation

[Corporation, Company, Government Agency, Firm, etc.]

Mailing Address: P. O. Box 4358; Houston, Texas 77210-4358

Individual Authorized to Act for Registrant: Name: Irene T. Garcia Title: Staff Engineer

Address: Same Telephone: (713) 431-1221 Fax: (713) 431-1450

Does this action result in the registration of any grandfathered facilities?  YES  NO

II. PHYSICAL LOCATION OF FACILITY (LATITUDE AND LONGITUDE MUST BE TO THE NEAREST SECOND)

Name of Plant or Site: Clear Lake Gas Plant

Street Address or Description of Location: 5120 Genoa Red Bluff Rd.

Nearest City: Pasadena Zip Code: 77505 County: Harris

Latitude: 029:37:59 Longitude: 095:07:02

Site Requirements:

- A. Submit a plot plan to scale of the property showing the location of plant boundaries, plant equipment, and the surrounding areas.
- B. Furnish an area map with a scale showing the facility location relative to highways and towns.
- C. A physical address or accurate driving directions must be provided on all registrations.

III. TYPE OF FACILITY

A. Applicable Exemption or Permit by Rule Number(s) from TNRCC List:

106.512

B. Name of Facility and Company's Facility Number: Clear Lake Gas Plant

C. TNRCC Account Identification Number: HG-0234-M

Standard Industrial Classification Code: 1321

D. Previous Special Exemption or Permit Number: NA

E. Operating Schedule: Hours/Day: 24 Days/Week: 5 Weeks/Year: 52

F. Proposed Start of Construction (Date): 05/01/2001 Operation (Date): 05/15/2001

G. Permanent  Portable  Length of Time at this Site, If Portable: \_\_\_\_\_

H. Does the company (including subsidiaries and parent companies) employ 100 or fewer persons?

YES  NO

IV. PROCESS INFORMATION

Description of Process:

Prepare and attach a written description of the exempt process and applicable checklists (when available).

The description must be in sufficient detail to indicate that the facility will conform to the specified exemption.

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MAY 10 2001

Air & Waste Applications Team

**V. EMISSIONS DATA**

Furnish a description of the basis for emission rates including fugitives(calculations, emission factors, measurement, New Source Performance Standards, etc.).

Emission Point Number	Name of Source	Name of Air Contaminant	Emission Rate of Each Air Contaminant			
			Pound/Hour		Tons/Year	
			Gaseous	Particulate	Gaseous	Particulate
EXHSTKGL1	Compressor Engine	NOx	2.3		9.9	
		CO	1.7		7.5	
		VOC	0.45		2.0	
EXHSTKGL2	Compressor Engine	NOx	2.3		9.9	
		CO	1.8		8.0	
		VOC	0.34		1.5	

**VI. COPIES TO REGIONAL OFFICE/LOCAL POLLUTION CONTROL PROGRAM**

The required copy of the registration request has been sent to the Regional Office of the TNRCC:

YES    NO

The required copy of the registration request has been sent to the local programs (if applicable):

YES    NO    NA

**VII. SIGNATURE**

I, Roland L. Moreau

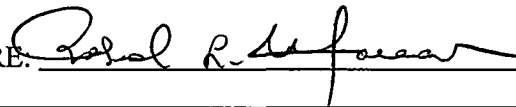
(Name)

Regulatory Compliance Supervisor

(Title)

state that I have knowledge of the facts herein set forth and that the same are true and correct to the best of my knowledge and belief. I further state that to the best of my knowledge and belief, the project will satisfy the conditions and limitations of the indicated exemption. The facility will operate in compliance with all regulations of the Texas Natural Resource Conservation Commission and with federal U.S. Environmental Protection Agency regulations governing air pollution.

DATE: 5-3-01

SIGNATURE: 

**RECEIVED**

**MAY 10 2001**

Air & Waste Applications Team

01/22/2002 ----- NSR PERMITS IMS- PROJECT RECoRD -----

PROJECT#: 80516      PERMIT#: 47937      STATUS: X  
 CREATED: 05/10/2001      REG6NOV:      PROJTYPE: XRVW  
 FEE DATE:      DATE BO:      DX1/SP: 512  
 FEE AMT: \$ 0      BD-ORD#:      NEW JOBS: 0

GROUP: PBRT

PARSTAFF1 : TAYLOR, PAM  
 TECHENGR : HEARNS, DARIO

ISSUED TO: EXXON MOBIL

**PRIMARY CONTACT INFORMATION**

NAME: MR ROLAND L MOREAU      TITLE: REGULATORY COMPLIANCE SUPER  
 BUILDING:      PHONE: 713-431-1221 ext  
 STREET: PO BOX 4358      FAX: 713-431-1450 ext  
 CITY/STATE, ZIP: HOUSTON, TX , 77210-4358 COUNTRY:

**PROJECT INFORMATION**

UNIT: CLEAR LAKE GAS PLANT  
 SIC: 1321      REGION: 12      ACCOUNT: HG0234M  
 COUNTY: HARRIS      CAPUNITS:      UNITYTYPE: OGBATE  
 CAPACITY:      CITY: PASADENA  
 LOCATION: 5120 GENOA RED BLUFF ROAD  
 GRANDFATHER-TO-PERMIT:      90% : NO      SURVEY : NO      VERP : NO  
 NO

DETERMINATION DATE:

**PUBLIC NOTICE**

PUBLIC NOTICE REQUIRED?:      PN1 ALT LANGUAGE: NO      PN2 ALT LANGUAGE: NO  
 NO

	PUB MEETING	PUB HEARING	MAILING LIST	COMMENTS
NUMBER OF REQUESTS:	0	0	0	0

TONS/YR REDUCTION	NOX	CO	VOC	PM	SO2	OTHER	TOTAL
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**PROJECT ACTIVITY HISTOrY**

A - RECEIVED :      05/10/2001      A - PAR RECEIVED :      05/10/2001      A - PARTRANS :      05/14/2001  
 SUP - PROJECT ISSUED :      06/28/2001      X :      06/28/2001

**PROJECT ATTRIBUTES**

**PROJECT LINK**

Robert J. Huston, *Chairman*  
R. B. "Ralph" Marquez, *Commissioner*  
John M. Baker, *Commissioner*  
Jeffrey A. Saitas, *Executive Director*



## TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

*Protecting Texas by Reducing and Preventing Pollution*

June 28, 2001

Mr. Roland Moreau  
Regulatory Compliance Supervisor  
Exxon Mobil Corporation  
P.O. Box 4358  
Houston, Texas 77210

Re: Permit by Rule Registration No. 47937  
Clear Lake Gas Plant  
Pasadena, Harris County  
Account No. HG-0234-M

Dear Mr. Moreau:

This is in response to your permit by rule registration, Form PI-7, concerning the proposed installation of two engines at the above-referenced site near Pasadena in Harris County. The routine emissions associated with this facility are 24.3 tons per year (tpy) of nitrogen oxides, 18.2 tpy of carbon monoxide, and 4.8 tpy of volatile organic compounds.

After evaluation of the information which you have furnished, we have determined that your facility is exempt from permitting procedures under 30 Texas Administrative Code (TAC) Section 106.512 if constructed and operated as described in your registration request. This permit by rule was authorized by the Executive Director of the Texas Natural Resource Conservation Commission (TNRCC) pursuant to 30 TAC Chapter 106.

A copy of the permit by rule in effect at the time of this registration is enclosed. You must construct, install, or modify facilities in accordance with the version of the permit by rule in effect when construction, installation, or modification actually begins (see 30 TAC §106.4[a][5]). After completion of construction, installation, or modification, the facility shall be operated in compliance with the all applicable conditions of the claimed permit by rule and 30 TAC §106.4.

Mr. Roland Moreau

Page 2

June 28, 2001

Re: Permit by Rule Registration No. 47937

Your cooperation in this matter is appreciated. If you have any questions concerning this permit by rule, please call Mr. Dario J. Hearn at (713) 767-3740 or write him at the Texas Natural Resource Conservation Commission, Office of Permitting, Remediation, and Registration, Air Permits Division (MC-162), P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,



Duncan F. Stewart, P.E., Manager  
Permit By Rule/General Operating Permits Section  
Air Permits Division  
Texas Natural Resource Conservation Commission

DS/DH/jr

Enclosure

cc: Mr. Arturo Blanco, Air Program Manager, Region 12 - Houston  
Mr. Rob Barrett, Director, Harris County Public Health and Environmental Services, Pollution Control Department, Pasadena  
Mr. Don Turner, M.D., Director, Health Department, The City of Pasadena, Pasadena

Record No. 80516

Texas Natural Resource Conservation Commission  
Chapter 106 - Permits by Rule

SUBCHAPTER W : TURBINES AND ENGINES

**§106.512. Stationary Engines and Turbines (Previously SE 6).**

Gas or liquid fuel-fired stationary internal combustion reciprocating engines or gas turbines that operate in compliance with the following conditions of this section are exempt.

(1) The facility shall be registered by submitting the commission's Form PI-7, Table 29 for each proposed reciprocating engine, and Table 31 for each proposed gas turbine to the commission's Office of Air Quality in Austin within ten days after construction begins. Engines and turbines rated less than 240 horsepower (hp) need not be registered, but must meet paragraphs (5) and (6) of this section, relating to fuel and protection of air quality. Engine hp rating shall be based on the engine manufacturer's maximum continuous load rating at the lesser of the engine or driven equipment's maximum published continuous speed. A rich-burn engine is a gas-fired spark-ignited engine that is operated with an exhaust oxygen content less than 4.0% by volume. A lean-burn engine is a gas-fired spark-ignited engine that is operated with an exhaust oxygen content of 4.0% by volume, or greater.

(2) For any engine rated 500 hp or greater, subparagraphs (A) - (C) of this paragraph shall apply.

(A) The emissions of nitrogen oxides (NO<sub>x</sub>) shall not exceed the following limits:

- (i) 2.0 grams per horsepower-hour (g/hp-hr) under all operating conditions for any gas-fired rich-burn engine;
- (ii) 2.0 g/hp-hr at manufacturer's rated full load and speed, and other operating conditions, except 5.0 g/hp-hr under reduced speed, 80-100% of full torque conditions, for any spark-ignited, gas-fired lean-burn engine, or any compression-ignited dual fuel-fired engine manufactured new after June 18, 1992;
- (iii) 5.0 g/hp-hr under all operating conditions for any spark-ignited, gas-fired, lean-burn two-cycle or four-cycle engine or any compression-ignited dual fuel-fired engine rated 825 hp or greater and manufactured after September 23, 1982, but prior to June 18, 1992;
- (iv) 5.0 g/hp-hr at manufacturer's rated full load and speed and other operating conditions, except 8.0 g/hp-hr under reduced speed, 80-100% of full torque conditions for any spark-ignited, gas-fired, lean-burn four-cycle engine, or any compression-ignited dual fuel-fired engine that:
  - (I) was manufactured prior to June 18, 1992, and is rated less than 825 hp; or
  - (II) was manufactured prior to September 23, 1982;
- (v) 8.0 g/hp-hr under all operating conditions for any spark-ignited, gas-fired, two-cycle lean-burn engine that:
  - (I) was manufactured prior to June 18, 1992, and is rated less than 825 hp; or
  - (II) was manufactured prior to September 23, 1982;

(vi) 11.0 g/hp-hr for any compression-ignited liquid-fired engine.

- (B) For such engines which are spark-ignited gas-fired or compression-ignited dual fuel-fired, the engine shall be equipped as necessary with an automatic air-fuel ratio (AFR) controller which maintains AFR in the range required to meet the emission limits of paragraph (2)(A) of this section. An AFR controller shall be deemed necessary for any engine controlled with a non-selective catalytic reduction (NSCR) converter and for applications where the fuel heating value varies more than  $\pm 50$  British thermal unit/standard cubic feet from the design lower heating value of the fuel. If an NSCR converter is used to reduce  $\text{NO}_x$ , the automatic controller shall operate on exhaust oxygen control.
- (C) Records shall be created and maintained by the owner or operator for a period of at least two years, made available, upon request, to the commission and any local air pollution control agency having jurisdiction, and shall include the following:
- (i) documentation for each AFR controller, manufacturer's, or supplier's recommended maintenance that has been performed, including replacement of the oxygen sensor as necessary for oxygen sensor-based controllers. The oxygen sensor shall be replaced at least quarterly in the absence of a specific written recommendation;
  - (ii) documentation on proper operation of the engine by recorded measurements of  $\text{NO}_x$  and carbon monoxide (CO) emissions as soon as practicable, but no later than seven days following each occurrence of engine maintenance which may reasonably be expected to increase emissions, changes of fuel quality in engines without oxygen sensor-based AFR controllers which may reasonably be expected to increase emissions, oxygen sensor replacement, or catalyst cleaning or catalyst replacement. Stain tube indicators specifically designed to measure  $\text{NO}_x$  and CO concentrations shall be acceptable for this documentation, provided a hot air probe or equivalent device is used to prevent error due to high stack temperature, and three sets of concentration measurements are made and averaged. Portable  $\text{NO}_x$  and CO analyzers shall also be acceptable for this documentation;
  - (iii) documentation within 60 days following initial engine start-up and biennially thereafter, for emissions of  $\text{NO}_x$  and CO, measured in accordance with United States Environmental Protection Agency (EPA) Reference Method 7E or 20 for  $\text{NO}_x$  and Method 10 for CO. Exhaust flow rate may be determined from measured fuel flow rate and EPA Method 19. California Air Resources Board Method A-100 (adopted June 29, 1983) is an acceptable alternate to EPA test methods. Modifications to these methods will be subject to the prior approval of the Source and Mobile Monitoring Division of the commission. Emissions shall be measured and recorded in the as-found operating condition; however, compliance determinations shall not be established during start-up, shutdown, or under breakdown conditions. An owner or operator may submit to the appropriate regional office a report of a valid emissions test performed in Texas, on the same engine, conducted no more than 12 months prior to the most recent start of construction date, in lieu of performing an emissions test within 60 days following engine start-up at the new site. Any such engine shall be sampled no less frequently than biennially (or every 15,000 hours of elapsed run time, as recorded by an elapsed run time meter) and upon request of the executive director. Following the initial compliance test, in lieu of performing stack sampling on a biennial calendar basis, an owner or operator may elect to install and operate an elapsed operating time meter and shall test the engine within 15,000 hours of engine operation after the previous emission test. The owner or operator who elects to test on an operating hour schedule shall submit in writing, to the appropriate regional office, biennially after initial sampling, documentation of the actual recorded hours of engine

operation since the previous emission test, and an estimate of the date of the next required sampling.

(3) For any gas turbine rated 500 hp or more, subparagraphs (A) and (B) of this paragraph shall apply.

(A) The emissions of  $\text{NO}_x$  shall not exceed 3.0 g/hp-hr for gas-firing.

(B) The turbine shall meet all applicable  $\text{NO}_x$  and sulfur dioxide ( $\text{SO}_2$ ) (or fuel sulfur) emissions limitations, monitoring requirements, and reporting requirements of EPA New Source Performance Standards Subpart GG--Standards of Performance for Stationary Gas Turbines. Turbine hp rating shall be based on turbine base load, fuel lower heating value, and International Standards Organization Standard Day Conditions of 59 degrees Fahrenheit, 1.0 atmosphere and 60% relative humidity.

(4) Any engine or turbine rated less than 500 hp or used for temporary replacement purposes shall be exempt from the emission limitations of paragraphs (2) and (3) of this section. Temporary replacement engines or turbines shall be limited to a maximum of 90 days of operation after which they shall be removed or rendered physically inoperable.

(5) Gas fuel shall be limited to: sweet natural gas or liquid petroleum gas, fuel gas containing no more than ten grains total sulfur per 100 dry standard cubic feet, or field gas. If field gas contains more than 1.5 grains hydrogen sulfide or 30 grains total sulfur compounds per 100 standard cubic feet (sour gas), the engine owner or operator shall maintain records, including at least quarterly measurements of fuel hydrogen sulfide and total sulfur content, which demonstrate that the annual  $\text{SO}_2$  emissions from the facility do not exceed 25 tons per year (tpy). Liquid fuel shall be petroleum distillate oil that is not a blend containing waste oils or solvents and contains less than 0.3% by weight sulfur.

(6) There will be no violations of any National Ambient Air Quality Standard (NAAQS) in the area of the proposed facility. Compliance with this condition shall be demonstrated by one of the following three methods:

(A) ambient sampling or dispersion modeling accomplished pursuant to guidance obtained from the executive director. Unless otherwise documented by actual test data, the following nitrogen dioxide ( $\text{NO}_2$ )/ $\text{NO}_x$  ratios shall be used for modeling  $\text{NO}_2$  NAAQS; Figure 1: 30 TAC §106.512(6)(A)

Figure 1: 30 TAC §106.512(6)(A)

<u>Device</u>	<u><math>\text{NO}_x</math> Emission Rate (Q) g/hp-hr</u>	<u><math>\text{NO}_2/\text{NO}_x</math> Ratio</u>
IC Engine	Less than 2.0	0.4
IC Engine	2.0 thru 10.0	$0.15 + (0.5/Q)$
IC Engine	Greater than 10.0	0.2
Turbines		0.25
IC Engine with catalytic converter		0.85

(B) all existing and proposed engine and turbine exhausts are released to the atmosphere at a height at least twice the height of any surrounding obstructions to wind flow. Buildings, open-sided roofs, tanks, separators, heaters, covers, and any other type of structure are considered as obstructions to wind flow if the distance from the nearest point on the obstruction to the nearest exhaust stack is less than five times the lesser of the height,  $H_b$ , and the width,  $W_b$ , where: Figure 2: 30 TAC §106.512(6)(B)

Figure 2: 30 TAC §106.512(6)(B)

Hb = maximum height of the obstruction, and

Wb = projected width of obstruction =

$$2\sqrt{\frac{Lw}{3.141}}$$

where:

L = length of obstruction

W = width of obstruction

(C) the total emissions of NO<sub>x</sub> (nitrogen oxide plus NO<sub>2</sub>) from all existing and proposed facilities on the property do not exceed the most restrictive of the following:

(i) 250 tpy;

(ii) the value (0.3125 D) tpy, where D equals the shortest distance in feet from any existing or proposed stack to the nearest property line.

Adopted February 19, 1997

Effective March 14, 1997

## AIR PERMIT BY RULE REVIEW

Reg. No. 47937  
Acct. No: HG-0234-M

Company: Exxon Mobil Corp  
Contact Name: Roland Moreau

Rec. No. 80516  
Date Rec'd: 05/10/01  
Date Rec'd Houston 05/08/01  
County: Harris  
Phone: (713) 431-1221  
Fax: (713) 431-1450

### General Rules Check:

- \* Project Emissions Acceptable? Yes
- \* PSD/Nonattainment Netting Req'd? Yes
- \* Sitewide PBR Emissions Acceptable? Yes
- \* Limits on use of PBRs at this site? No
- \* NSPS/NESHAPS/MACT Standards Apply? NO
- \* Compliance with all other applicable rules and regulations? Yes

### Overall Site / Unit Description:

Clear Lake Gas Plant ( addition of 2 compressors)

### Project Sources / Facilities, PBRs Claimed, Applicable Standards, Emissions and Control Summary: 106.512

The applicant is proposing to add two 360 hp Caterpillar 3508 TALE clean-burn gas engines. The site is a major source. Netting calculations have been provided( Table 2N).

Project Contemporaneous Changes (Table 2N is in the file)

For Nox summary of Contemporaneous changes = -15.8  
For VOC summay of Contemporaneous changes = +8.3

NAAQS compliance has been demonstrated by dispersion modeling. The model was run assuming building down wash and flat, urban terrain. The maximum one-hour concentration was 47.46 ug/m<sup>3</sup>. This value was converted to an annual maximum average by multiplying it by 0.08 giving an annual maximum of 3.8 ug/m<sup>3</sup>. The standard background concentration for Harris County is 60 ug/m<sup>3</sup>. 3.8 + 60 = 63.8 ug/m<sup>3</sup>, which is less than the 100 ug/m<sup>3</sup> threshold.

The applicant has calculated the compressor emissions based upon the proposed operation range of 515 hp as follows: 19.8 tpy NOX, 15.4tpy CO, and 3.48 tpy VOC.

According to TNRCC guidance my calculations are based upon the potential to emit.

The total estimated emissions associated with this facility are as follows:

24.3 tpy NOX, 18.23 tpy CO, and 4.8 tpy VOC.

Site Review required? No  
Public Notice Required? No

Date Approved:  
Date Completed Satisfactorily: N/A

Emissions Savings / Reductions due to rule compliance:

NO <sub>x</sub>	CO	VOC	PM	SO <sub>2</sub>	TPY
-----------------	----	-----	----	-----------------	-----

Are all general and specific applicable rule conditions satisfied? Yes

Dario J. Hearn 06/26/01  
Reviewer/Date

Emmanuel Ukandu  
Team Leader/Section Manager/Backup Date