Item Barcode: **50444961**

Attachment #1

AIR PERMIT

FOLDER LEVEL

AIR PA #: MR0008T 044016

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TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

April 17, 2000

Mr. Alex Evins
Environmental Manager
Diamond Shamrock Refining Company L.P.
HCR, Box 36
Sunray, Texas 79086

Re: Permit by Rule Registration No. 44016
No. 2 Asphalt and No. 1 PDA Heaters
Sunray, Moore County
Account ID No. MR-0008-T

Dear Mr. Evins:

This is in response to your permit by rule registration, Form PI-7, concerning the proposed increase in firing rates of two heaters at the refinery, Sunray, Moore County. We understand that the No. 2 Asphalt Heater (EPN: H-5) and the No. 1 PDA Asphalt Heater (EPN: H-40) will each increase firing rates. There will also be increased emissions from asphalt storage and loading. Emissions increases above permit allowables for oxides of nitrogen, carbon monoxide, sulfur dioxide, VOCs, and PM are, respectively, 8.05, 1.56, 0.06, 0.14, and 0.55 tons per year.

After evaluation of the information which you have furnished, we have determined that your proposed modification is authorized under 30 Texas Administrative Code (TAC) Section 106.261 if constructed and operated as described in your registration request. This permit by rule was authorized by 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 operate in accordance with all requirements of the enclosed permit by rule.

You are reminded that regardless of whether a permit is required, these facilities must be in compliance with all rules and regulations of the TNRCC and of the U.S. Environmental Protection Agency at all times.

Re: Permit by Rule Registration No. 44016

Your cooperation in this matter is appreciated. If you have any questions concerning this permit by rule, please call Mr. Duncan Stewart, P.E., at (512) 239-1906 or write to him at 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,

Tammy Villarreal

Tammy Villarreal
Manager, Chemical and Coatings Section
Air Permits Division

TV/DS/ds

Enclosure

cc: Mr. Richard Lee, Air Program Manager, Amarillo

Record No. 72128

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

EXEMPTION §106.261
REGISTRATION FORM PI-7-261

For instructions on using this exemption alone or in conjunction with another exemption, see the back of this form.

Please mail to: TNRCC, Office of Air Quality, New Source Review Permits Division (MC-162), PO Box 13087, Austin, TX 78711-3087

Send copies to: TNRCC Regional Office • Done
Local Program(s)(if applicable) • Done

I. Company Name Diamond Shamrock Refining Company, L.P. (Corporation, Company, Government Agency, Firm, etc.) Attn: Lisa Trowbridge (Company Representative)
Mailing Address HCR1, Box 36, Sunray, Texas 79086

Technical Contact Lisa Trowbridge (Consultant, Owner, Operator, etc.) Title Environmental Engineer
Contact's Address HCR1, Box 36, Sunray, Texas 79086 Telephone (806) 935-1276 Fax (806) 935-1216

II. PHYSICAL LOCATION OF EXEMPT FACILITY

Name of Plant or Site McKee Plants Operating Unit Name (if applicable): No. 2 Asphalt and No. 1 PDA Heaters

Physical Address HCR1, Box 36 44016
(A physical address or accurate driving directions must be provided on all registrations.)

Nearest City Sunray Zip Code 79086 County Moore

TNRCC Account Number: MR - 0008 - T or, if not assigned, give: Latitude 35 57 35.6 Longitude 101 52 48.9

SITE REQUIREMENTS: A. Submit a plot plan to scale of the property locating and identifying emission points, the facility, plant boundaries, and plant equipment.
B. Furnish an area map to scale showing the facility and surrounding area, including nearest receptor (§106.261 (2)).
C. A&B need not be duplicated if the information has previously been submitted in Permit No. _____ or Exemption Registration No. _____. (If authorizing a new facility, more information concerning the location of emission points may be submitted in IV. D. below).

III. TYPE OF FACILITY:
A. Previous authorization (Special Exemption, Exemption Registration, or Permit) Number 9914
B. Operating Schedule: Hours/day 24 Days/week 7 Weeks/year 52
C. Permanent [X] Temporary [ ]
D. Start of Construction _____ (Date) Start of Operation _____ (Date) End of Operation N/A (Date)

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IV. PROCESS INFORMATION
This Exemption is being used to:
A. [ ] Change chemical service from _____ to _____
B. [ ] Add chemical(s): _____
C. [ ] Add process fugitive components
D. [X] Other uses (including add new unit or equipment): Attach brief, written descriptions of the process and location of new emission points (if not submitted in II. A. and B. above).

V. EMISSIONS DATA Attach emission calculations.

Emission Point Number (from Plot Plan)	Emission Point Name (Ex: Thermal Oxidizer, solvent distillate unit, Fugitive area 1, cyclone)	Name of Air Contaminant (Ex: acetylene, sulfur dioxide, limestone)	CAS Number	Distance to nearest receptor (§106.261 (2)) (ft)	Vent type (stack or fugitive)	Emission Rate of Each Air Contaminant	
						lb/hr	tons/year
	See Table 4-1						

VI. I, Alex Evins (Name) Environmental Manager (Title)
state that I have knowledge that the facts represented and submitted in this claim 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 exemption §106.261.

DATE 3/23/2000 SIGNATURE A G Evins

Rev. 1-20-99

AIR PERMIT BY RULE REVIEW

Registration No. 44016 Record No. 72128 Account. No. MR-0008-T Date Rec'd 3/27/00
Company Diamond Shamrock Refining Company L.P. County Moore
Contact Name Lisa Trowbridge Phone/Fax Nos. (806) 935-1276/1216

General Rules Check:

* Project Emissions Acceptable? Yes _x_ No __
* PSD/Non-attainment Netting Req'd? Yes __ No _x_ Does the site net Yes __ No __
* Sitewide PBR Emissions Acceptable? Yes _x_ No __
* Limits on use of PBRs at this site? Yes __ No _x_ Are they met? Yes __ No __
* NSPS/NESHAPS/MACT Standards Apply? Yes __ No _x_ Are they met? Yes __ No __
* Compliance with all other applicable rules and regulations? Yes _x_ No __

Overall Site / Unit Description: Diamond Shamrock's McKee Refinery, Sunray.

Project Sources / Facilities, PBRs Claimed, Applicable Standards, Emissions and Control Summary: 106.261 is claimed for firing rate increases in heaters EPN H-5 (No. 2 Asphalt) and EPN H-40 (No. 1 PDA Asphalt). There will also be increased emissions from asphalt storage and loading. Emissions increases above permit allowables for oxides of nitrogen, carbon monoxide, sulfur dioxide, VOCs (asphaltenes), and PM are, respectively, 8.05, 1.56, 0.06, 0.14, and 0.55 tons per year. The emissions limits of 106.261 are met.

Diamond Shamrock has successfully demonstrated that these heater firing rate changes are not related to other changes at the refinery which are in NSR/PSD permit amendment.

Site Review required? Yes __ No _x_ **Date Approved/Disapproved:**
Public Notice Required? Yes __ No _x_ **Date Completed Satisfactorily:**
Emissions Savings / Reductions due to rule compliance:

NO_x	CO	VOC	PM	SO_2	TPY

Are all general and specific applicable rule conditions satisfied? Yes _x_ No __

Reviewer / Date

Team Leader/Section Manager/Backup Date 4/13/00

JD Consulting, L.P.
3006 Bee Cave Rd., Suite B200
Austin, Texas 78746
512-347-7588
fax - 512-347-8243

March 23, 2000

Mr. Duncan Stewart, P.E.
Texas Natural Resource Conservation Commission
Office of Permitting, Remediation & Registration
Air Permits Division (MC-162)
Post Office Box 13087
Austin, Texas 78711-3087

44015

Re: Permit by Rule Registration
Firing Rate Increases from Asphalt Heaters
Diamond Shamrock Refining Company, L.P.
Sunray, Moore County
TNRCC Account No. MR-0008-T

Dear Mr. Stewart:

On behalf of the Diamond Shamrock Refining Company, L.P, JD Consulting is submitting the enclosed permit by rule registration for firing rate increases in two heaters located in the asphalt unit at the McKee Plants refinery near Sunray, Moore County, Texas. The two heaters are the No.2 Asphalt Heater (EPN:H-5) and No. 1 PDA Asphalt Heater (EPN:H-40). Both heaters are currently permitted in Permit No. 9914. The increased firing rates and associated emissions qualify for permit by rule under 30 TAC §106.261.

On December 3, 1999 Diamond Shamrock submitted exemption requests for 10 heaters, including the two asphalt heaters in this submittal. Subsequently, the TNRCC requested additional documentation showing that each of the heater firing rate increases were unrelated and not part of the same project. Even through Diamond Shamrock believes that the firing rate increases from each heater are unrelated, the company has decided to amend the respective permits to authorize the firing rate increases for seven of the heaters. These seven heaters are the crude, vacuum, and hydrocracker heaters listed in our December 3, 1999 submittal. The increased firing rates for these heaters will be submitted as updated representations for the PSD permitting associated with the FCCU expansion project being reviewed by Mr. Scott Poole. Diamond Shamrock has determined that the current authorized firing rate for the reformer charge heater (H-38) is sufficient; therefore, an increased firing rate is not necessary at this time.

We wish to thank you for your consideration of this registration. If you have any questions or need further information, please feel free to contact me at 347-7588 or Ms. Lisa Trowbridge of Diamond Shamrock at (806) 935-1276.

Sincerely,

STATE OF TEXAS
JOE M. KUPPER
79749
REGISTERED
PROFESSIONAL ENGINEER
3/23/00

Joe M. Kupper, P.E.
Senior Consultant

JMK/sms
Enclosure

RECEIVED
MAR 27 2000
PAR SECTION

cc: Mr. Rich Lee, Air Section Manager, TNRCC Region 1
Ms. Lisa Trowbridge, Diamond Shamrock Refining Company, L.P.

JD Consulting, L.P.
3006 Bee Cave Rd., Suite B200
Austin, Texas 78746
512-347-7588
fax - 512-347-8243

Air Permitting Exemption Documentation for: Firing Rate Increase for No. 2 Asphalt Heater (H-5) and No. 1 PDA Asphalt Heater (H-40)

Diamond Shamrock Refining Company, L.P.
Moore County, Texas

March 2000

44016

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Appendix B Vendor Emission Factors

1 Introduction

Diamond Shamrock Refining Company, L.P. (Diamond Shamrock) is permitted to operate the No.2 Asphalt Heater (EPN:H-5) and No. 1 PDA Asphalt Heater (EPN:H-40) under permit 9914 at the McKee Refinery near Sunray in Moore County, Texas. Diamond Shamrock proposes to fire the heaters harder than what was represented in permitting the heaters. The increased firing rates and associated emissions qualify for exemption under 30 TAC §106.261 (previously S.E. 106). The use of §106.261 to authorize small firing rate increases is consistent with past TNRCC determinations (see Appendix A). JD Consulting. L.P. verified that this continued to be TNRCC's current practice in telephone conversations with Ms. Tammy Villarreal, Chemical Section Manager, and Mr. Jim Linville, Combustion Section, on September 9, 1999. Diamond Shamrock has determined that upstream and downstream units will continue to operate within their current authorized throughputs and emissions such that no additional permit or permit by rule review is required pursuant to the planned change in the heaters' firing rates.

The No. 2 Asphalt Heater maximum firing rate, based on lower heating value, will increase from 8.9 MMBtu/hr to 12 MMBtu/hr. The No. 1 PDA Asphalt Heater maximum firing rate, based on lower heating value, will increase from 50 MMBtu/hr to 60 MMBtu/hr. These heaters fire only refinery fuel gas. Hydrogen sulfide in the fuel will be limited to 0.1 gr/dscf on an hourly basis and 0.03 gr/dscf on an annual average. Carbon monoxide, VOCs, and particulate matter emissions will be limited by good combustion practices.

Even with the firing rate increases, the downstream tanks and loading will continue to operate within their existing permitted basis. In Table 4-4, it can be seen that the emissions from the increased firing rates will be less than PSD significance levels. In addition the total allowable VOC emissions for the asphalt tanks and loading rack is 10.1 tpy; therefore, using this total allowable VOC emission plus the increase from the heaters of 0.56 tpy, the worst-case VOC emission increase is 10.66 tpy. This worst-case VOC emission increase is less than the PSD significance level for VOC; therefore, PSD netting is not required.

An area map/plot plan showing the location of the facility and the nearest off-plant receptor is included as Figure 1-1.

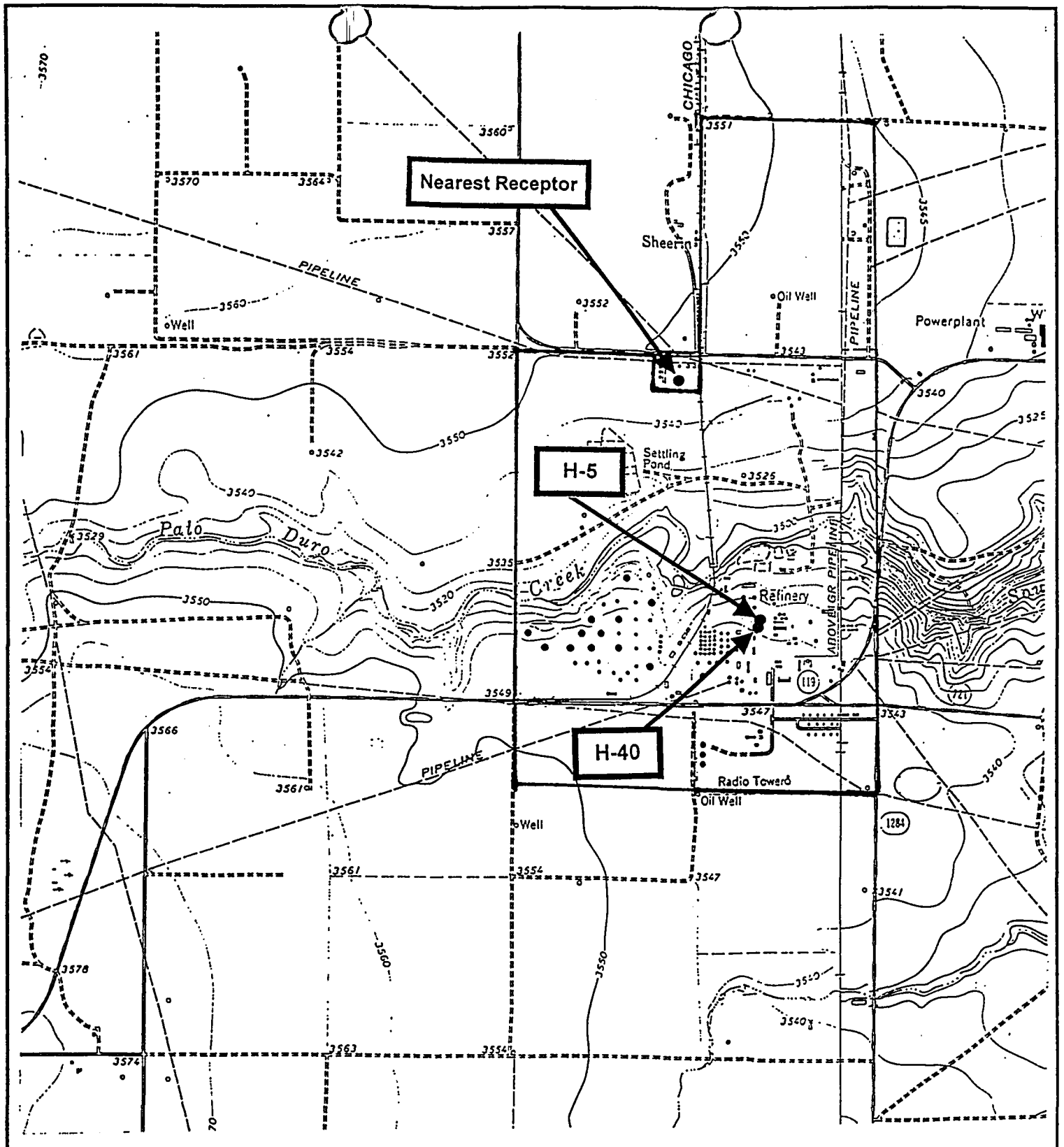
This exemption registration contains the following sections:

- **Administrative Forms (Section 2).** Documents required under Standard Exemption §106.261 including: Registration Form PI-7-261; Exemptions from Permitting 30 TAC Chapter 106, Section 106.4, Applicability Checklist; Exemption §106.261 Checklist (Previously Standard Exemption 106), Facilities (Emission Limitations).

- **Process Description (Section 3).** Process description and process flow diagram for the asphalt heaters.

- **Emission Calculations (Section 4).** The projected emissions from the firing rate increases are provided in this section. This includes products of combustion from each heater.

- **Exemption Requirements (Section 5).** Contains documentation that the modification to the existing permitted facilities meets the requirements of Standard Exemptions §106.261 as well as the general exemption requirements of §106.4.



Source: Dumas North (1965) and Dumas NE (1972) USGS 7.5 minute quad maps

Scale 1" = 2000 feet

Figure 1-1
Area Map/Plot Plan

Diamond Shamrock - McKee

JDC
JD Consulting, LLC
3006 Bee Cave Rd. - Suite B200
Austin, Texas 78746

2 Administrative Forms

Included in this section of the exemption registration are the following TNRCC forms and checklists:

- Registration Form PI-7-261;
- Exemptions from Permitting 30 TAC Chapter 106, Section 106.4, Applicability Checklist; and
- Exemption §106.261 Checklist (Previously Standard Exemption 106), Facilities (Emission Limitations).

Company Name: Diamond Shamrock Refining Company, L.P. Checklist completed by: JMK Date: 3/20/00
Facility Type: Refinery Exemption(s) claimed: '106. 261
Project Description: Increase firing rate in No. 2 Asphalt and No. 1 PDA heaters

(including equipment, materials, and brief process description)

List the maximum annual emission rates, in **TONS PER YEAR (TPY),** for this project:

CO : 1.56	NO_x: 8.05	PM : 0.55	
SO_2: 0.06	VOCs: 0.14	Other:	

The following questions require a "Yes" or "No" answer to be indicated for this exemption claim:

A. '106.4(a)(5): Current Exemption Requirements

Yes X No ___ Have you checked to determine if this exempt project is being claimed under the current version of 30 TAC 106?
If "Yes", continue to next question
If "No", please contact the TNRCC NSRP Division for a copy of the current exemption to be claimed.

B. '106.4(a)(7): Exemption prohibition check

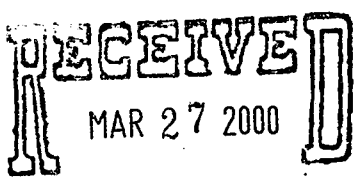
Yes ___ No X Are there any air permits under the same account containing permit conditions which prohibit or restrict the use of standard exemptions?
If "No" continue to next question
If "Yes", exemptions may not be used or their use must meet the restrictions of the permit.
A new permit or permit amendment may be required. ***List permit number(s):*** ___.

C. '106.4(b): Circumvention check

§106.4(b) states "No person shall circumvent by artificial limitations the requirements of §116.110 of this title (covering permitting)." Circumvention by artificial limitations may include but is not limited to:

1. *dividing a complete project into separate segments to circumvent §106.4(a)(1) limits;*
2. *claiming feed or production rates below the physical capacity of the project's equipment in order to begin constructing facilities before a permit or permit amendment is approved for full scale operations, particularly when the unit will not be economically viable at less than permitted capacity;*
3. *claiming a limited chemical list in order to begin constructing facilities before a permit or permit amendment is approved for additional chemicals, particularly when the unit will not be economically viable until the additional chemicals are authorized.*

Yes ___ No X Does your project meet any of the criteria listed above?
If "No", continue to next rule question
If "Yes", an exemption may not be claimed



D. '106.4(c) - (d): Compliance with all Rules

Yes X No ___ Will the facility comply with all rules and regulations of the TNRCC, the intent of the Texas Clean Air Act, and any local permitting or registration requirements?
If "Yes", continue to next rule question
If "No", an exemption may not be claimed.

E.'106.4(a)(1): Emission limits check

Yes ___ No X The maximum emissions from all facilities at the site, including this exemption claim, are less than 25 tpy of any contaminant.
If the answer to this question is "Yes", no further review is needed to complete this checklist.
Forward all information needed to verify your exemption claim to the TNRCC.
If "No", please continue through the remaining applicable pages of the checklist.

Detailed §106.4 Requirements

F. '106.4(a)(1): Emission limits check continued....

1. Yes_X_ No___ Are SO_x, PM, VOC, and other emissions shown above each less than 25 TPY?
2. Yes_X_ No___ Are the NO_x and CO emissions shown above each less than 250 TPY?
   If the answer to either question is "No", an exemption cannot be claimed.
   If the answer to both questions is "Yes", continue to next rule question

G. '106.4(a)(4): Site exemption emissions (*For all exemptions at the property and/or under the same Account ID No.)*

1. Yes___ No_X_ Are total NO_x and CO emissions each less than 250 TPY?
2. Yes___ No_X_ Are total emissions of all other contaminants each less than 25 TPY?
   If the answer to both questions is "Yes", continue to next rule question
   If either question is answered "No" please answer the following:

3. Yes_X_ No___ Has any facility at the property had public notification and comment as required in 30 TAC 116 (or applicable procedures of Chapter 116 in effect at the time)?
   If "Yes", please describe the associated permit action and when notice occurred:
   If "No", an exemption may not be claimed.

H. '106.4(a)(6): Federal Requirements for NSPS & NESHAPs

1. Yes_X_ No___ Are any EPA New Source Performance Standards (NSPS) applicable to the facilities for which the exemption is being claimed?

2. Yes___ No_X_ Are any EPA National Emissions Standards for Hazardous Air Pollutants (NESHAPs) applicable to the facilities for which the exemption is being claimed?
   If "No", continue to next rule question
   *If "Yes", **Please list the applicable SubPart(s):***
   Please attach a discussion of how the facilities will meet applicable standards.

I. '106.4(a)(2): Nonattainment checklists

1. Yes___ No_X_ The facility to be exempted is located in a nonattainment county? (See list pages 1 & 2)
   If "Yes", complete applicable pages of this checklist, then answer the next question
   If "No", continue to the PSD questions below
2. Yes___ No___ For any regulated nonattainment contaminant, has this project triggered a nonattainment review?
   If "No",continue to the PSD questions below
   *If "Yes", the project is a major source or a major modification **and an exemption may not be used.***
   A Nonattainment Permit review must be completed to authorize the project.

J. '106.4(a)(3): Prevention of Significant Deterioration (PSD) checklist

Yes___ No_X_ For any regulated National Ambient Air Quality Standard (NAAQS) contaminant, has this project triggered a PSD review? *(Please complete the last page of this checklist, then answer:)*
If "No",no further review is needed to complete the checklist for Chapter 106. Forward all information needed to verify your exemption claim to the TNRCC.
*If "Yes", the project is a major source **and an exemption may not be used.** A PSD Permit review must be completed to authorize the project.*

§106.4(a)(3): Prevention of Significant Deterioration (PSD) checklist

Please note that If the facility is located in a non-attainment area for VOCs, CO or PM10, you do not have to be reviewed again for PSD Applicability for that contaminant.

The following questions require a "Yes" or "No" answer to be indicated for this exemption claim:

S. PSD Applicability check

Named Sources

1. Yes__X__ No___ Is the SITE a **named** PSD source? (See list on page 2 of checklist)
   If "No", continue to the un-named source questions (#4) below
   If "Yes", please answer the following:
2. Yes__X__ No___ Prior to this action, are site-wide emissions of any NAAQS regulated pollutant (including fugitives) greater than 100 TPY? (i.e. Is this site an existing major source?)
   If "Yes", the site is a major source. Please answer questions #6-8 below (PSD "Significance")
   If "No", answer the next question
3. Yes___ No___ For any regulated NAAQS contaminant (except as noted above), will the project=s increases be greater than 100 TPY? (i.e. Is this project major?)
   If "No", no further review is needed to complete the checklist for Chapter 106.
   *If "Yes",the project is a major source **and an exemption may not be used** and a PSD Permit review must be completed to authorize the project.*

Un-named Sources

4. Yes___ No___ Is the SITE an **un-named** PSD source? (See list on page 2 of checklist)
   If "No", the above questions regarding named sources should be completed
   If "Yes", please answer the following:
5. Yes___ No___ Prior to this action, are site-wide emissions of any NAAQS regulated pollutant (point sources only) greater than 250 TPY? (i.e. Is this site an existing major source?)
   If "Yes", the site is a major source. Please answer questions #6-8 below (PSD "Significance")
   If "No", no further review is required. Please send this checklist and all additional documentation to the TNRCC NSRP Division and the applicable Regional office.

6. **PSD "Significance" check:**
   If the existing site is a major source, Complete the following chart and attach calculations to determine the project=s emission increases for all regulated NAAQS compounds (in TPY).

		NO_x	PM_{10}	CO	VOCs	SO_2	*Other:* _____	*Other:* _____
New allowable rate	+	42.05	3.15	8.86	11.34	2.96	_____	_____
Old actual rate**	-	23.47	1.72	4.83	0.68	0.18	_____	_____
Project Increase	=	18.58	1.44	4.04	10.66	2.78	_____	_____

7. Yes___ No__X__ For any regulated NAAQS contaminant, will the project's increases be greater than the PSD 'significant' rates? (i.e. Does this action trigger netting?) (See list on page 2 of checklist)
   If "No",no further review is needed to complete the checklist for Chapter 106.
   If "Yes", PSD Applicability review and netting calculations must be completed (attach).
   These netting calculations should be used to answer the following:
8. Yes___ No___ For any regulated NAAQS contaminant, are the contemporaneous net increases greater than the PSD 'significant' rates? (i.e. Is this project a major modification?)
   If "No",no further review is needed to complete the checklist for Chapter 106. Please attach all netting calculations and documentation for review by TNRCC NSRP staff.
   *If "Yes", the project is a major modification **and an exemption may not be used.***
   A PSD Permit review must be completed to authorize the project.

Exemption §106.261 Checklist
(Previously Standard Exemption 106)
Facilities (Emission Limitations)
This exemption requires registration with a PI-7-261

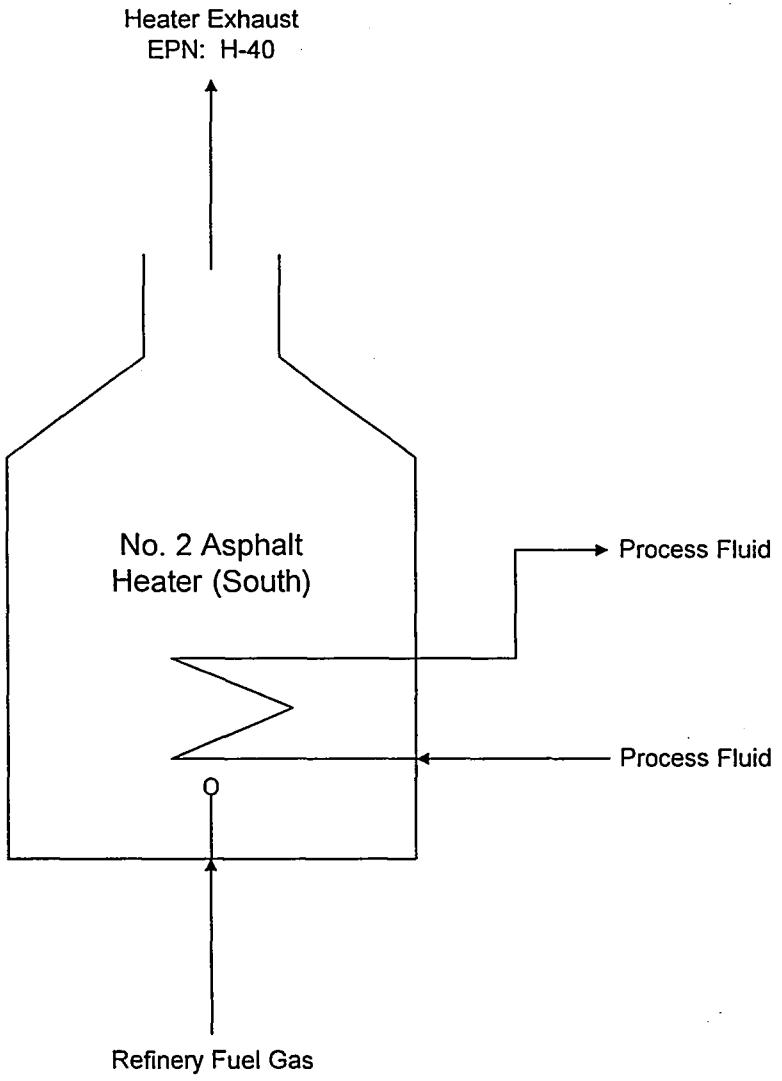
The following checklist has been developed to help you confirm that you meet the requirements of Exemption §106.261, previously Standard Exemption 106. **Any "no" answers indicate that the claim of exemption may not meet all the requirements for the use of Exemption '106.261.** If you do not meet all the requirements, you may alter the project design/operation in such a way that all the requirements of the exemption are met or obtain other authorization (i.e. construction permit, standard permit, etc).

YES	NO	NA	DESCRIPTION
X	_		Have you included a description of how this exemption claim meets the general rule for the use of exemptions? (A §106.4 checklist is available to satisfy this demonstration.)
X	_		Have you reviewed all other exemptions to ensure that none would have authorized the proposed construction or change had all the requirements of the exemption been met?
X	_		Is each emission source located at least 100 feet from any recreational area, residence, or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located?
X	_	_	Are the new or increased emissions, including fugitives, for each chemical listed in Exemption §106.261(3) less than or equal to 10 tons per year?
X	_	_	Are the new or increased emissions, including fugitives, for each chemical listed in Exemption §106.261(3) less than or equal to 6 pounds per hour.
X	_	_	Are all new or increased emissions less than or equal to one (1) pound per hour for any chemical shown in Table 262 or the 1997 ACGIH TLV list and having an L value or TLV of 200 mg/m^3 or more? (Emissions from compounds with a limit value of less than 200 mg/m^3 are not allowed under §106.261.) (List chemicals and attach calculations.)
_	_	X	Are all new or increased emissions less than or equal to one (1) pound per hour for any other chemical not listed or referenced in Table 262?
X	_	_	For physical changes or modifications to existing facilities, does all air pollution abatement equipment remain unchanged (i.e., no change or addition is allowed)? (This requirement does not mean that new facilities may not have control equipment.)
X	_	_	Will all visible emissions, except uncombined water, have opacity less than or equal to 5 percent in any five-minute period?
X	_	_	If the project emissions are 5 tons per year or more, has a PI-7-261 form been completed and submitted within 10 days of the installation or change.
_	_	X	If the project emissions are less than 5 tons per year, has a PI-7-261 form been completed and submitted within 10 days of the installation or change.
			Are the following included with the notification form:
X	_		description of the project?
X	_		emission calculations?
X	_		data identifying specific chemical names (MSDS, CAS number, etc.)?
X	_		limit values? and
X	_		description of control equipment, if any?

Revised 1/99

3 Process Description

Diamond Shamrock is proposing to increase the firing rate of the No. 2 Asphalt heater and the No. 1 PDA Asphalt Heater at the McKee Refinery in Moore County, Texas. The facilities heats process fluids to the proper operating temperature. The heaters are illustrated in the process flow diagram included as Figure 3-1.



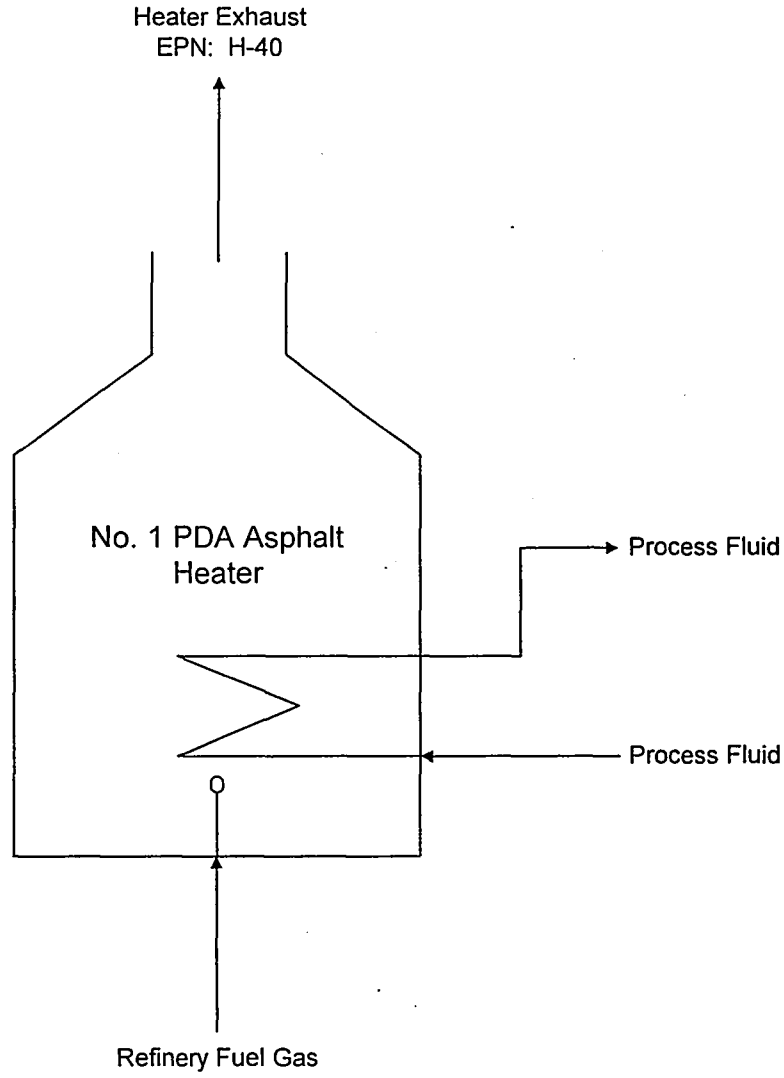


Figure 3-1

Ashpalt Heaters
Process Flow Diagram

Diamond Shamrock Refining Company, L.P. - Sunray, Texas

JDC

JD Consulting, LP
3006 Bee Cave Rd. - Suite B200
Austin, Texas 78746

4 Emission Calculations

Combustion emissions including VOC, NOx, PM10, and CO were estimated using emission factors guaranteed by the burner vendor, Callidus Technologies, Inc (see Appendix B). The emission factors (lb/MMBTU) were multiplied by the firing rate of the heater (MMBTU/hr) to give an emission rate in pounds per hour.

$$\text{lb/hr} = \text{lb/MMBTU} \times \text{MMBTU/hr}$$

Sulfur dioxide emissions were based on a fuel gas hydrogen sulfide content. The fuel gas hydrogen sulfide content is limited to 0.1 gr/dscf on an hourly basis and 0.03 gr/dscf on average. Sulfur dioxide emissions are calculated assuming that all hydrogen sulfide is combusted.

$$\text{lb SO2/hr} = \text{gr H2S/dscf} \div 7000\ \text{gr/lb} \div 34\ \text{lb H2S/lbmol} \times \left(\frac{1\ \text{mol SO2}}{1\ \text{mol H2S}}\right) \times 64\ \text{lb SO2/lbmol} \times \text{scf/hr}$$

Annual emission rates for all pollutants are based on continuous operation of the No. 2 Asphalt Heater and No. 1 PDA Asphalt Heater. The emission calculations for the two heaters at the increased firing rates are shown on Table 4-1.

As shown on Table 4-2, the short-term and annual emission rate increases from both heaters are within the limits specified in §106.261. In addition, the emission rates of all pollutants included in this exemption registration are less than the limits specified in §106.4.

The 1998/1998 actual emissions for the two heaters are shown on Table 4-3 and the PSD applicability calculations are shown on Table 4-4.

Table 4-1
Emission Rate Calculations at Increased Firing Rate

Hourly Proposed Emissions

Heater	EPN	Max Heater Duty (LHV) (MMBTU/hr)	Heating Value (BTU/scf)	Fuel Gas Flowrate (scf/hr)	Emission Factors (lb/MMBTU)				H2S Content (gr/dscf)	NOx	CO	PM10	VOC	SO2
					NOx	CO	PM10	VOC		lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
No. 2 Asphalt Heater (South)	H-5	12	712	16,854	0.2	0.02811	0.01	0.00393	0.1	2.40	0.34	0.12	0.05	0.45
No. 1 PDA Asphalt Heater	H-40	60	712	84,270	0.12	0.02811	0.01	0.00393	0.1	7.20	1.69	0.60	0.24	2.27

Annual Proposed Emissions

Heater	EPN	Average Heater Duty (LHV) (MMBTU/hr)	Heating Value (BTU/scf)	Fuel Gas Flowrate (scf/hr)	Emission Factors (lb/MMBTU)				H2S Content (gr/dscf)	NOx (tpy)	CO (tpy)	PM10 (tpy)	VOC (tpy)	SO2 (tpy)
					NOx	CO	PM10	VOC						
No. 2 Asphalt Heater (South)	H-5	12	858.4	13,979	0.2	0.02811	0.01	0.00393	0.03	10.51	1.48	0.53	0.21	0.49
No. 1 PDA Asphalt Heater	H-40	60	858.4	69,897	0.12	0.02811	0.01	0.00393	0.03	31.54	7.39	2.63	1.03	2.47

Table 4-2
Allowable Emission Increases for 106.261 Applicability

Short-term Emissions Increases (Limit=6 lb/hr (1 lb/hr for PM10))

Heater	NOx (lb/hr)	CO (lb/hr)	PM10 (lb/hr)	VOC (lb/hr)	SO2 (lb/hr)
No. 2 Asphalt Heater (H-5)					
Current Permit Limits	1.8	0.3	0.1	0.1	0.3
Proposed Emissions	2.40	0.34	0.12	0.05	0.45
Emission Increase	0.60	0.04	0.02	-0.05	0.15
No. 1 PDA Asphalt Heater (H-40)					
Current Permit Limits	6.0	1.4	0.5	0.2	1.9
Proposed Emissions	7.20	1.69	0.60	0.24	2.27
Emission Increase	1.20	0.29	0.10	0.04	0.37
Project Total (lb/hr):	**1.80**	**0.32**	**0.12**	**-0.02**	**0.52**

Annual Emission Increases (Limit=10 tpy)

Heater	NOx (tpy)	CO (tpy)	PM10 (tpy)	VOC (tpy)	SO2 (tpy)
No. 2 Asphalt Heater (H-5)					
Current Permit Limits	7.7	1.1	0.4	0.2	0.4
Proposed Emissions	10.51	1.48	0.53	0.21	0.49
Emission Increase	2.81	0.38	0.13	0.01	0.09
No. 1 PDA Asphalt Heater (H-40)					
Current Permit Limits	26.3	6.2	2.2	0.9	2.5
Proposed Emissions	31.54	7.39	2.63	1.03	2.47
Emission Increase	5.24	1.19	0.43	0.13	-0.03
Project Total (tpy):	**8.05**	**1.56**	**0.55**	**0.14**	**0.06**

Table 4-3
2-Year Actual Emissions

Heater	EPN	1998 Operating Schedule (hr/yr)	1998 Average Fuel Feed Rate (scf/hr)	1998 Fuel Gas Heating Value (BTU/scf)	1998 Heater Duty (MMBTU/hr)	1999 Operating Schedule (hr/yr)	1999 Average Fuel Feed Rate (scf/hr)	1999 Fuel Gas Heating Value (BTU/scf)	1999 Heater Duty (MMBTU/hr)	Emission Factors (lb/MMBTU) NOx	CO	PM10	VOC	H2S Content (gr/dscf) 1998	1999	NOx (tpy)	CO (tpy)	PM10 (tpy)	VOC (tpy)	SO2 (tpy)
No. 2 Asphalt Heater	H-5	8360	10,632	858.4	9.1	8664.0	8931.4	858.4	7.7	0.2	0.02811	0.01	0.00393	0.0045	0.0045	7.14	1.00	0.36	0.14	0.05
No. 1 PDA Asphalt Heater	H-40	8396	41,191	858.4	35.4	8708.0	33131.5	858.4	28.4	0.12	0.02811	0.01	0.00393	0.0045	0.0045	16.34	3.83	1.36	0.53	0.13

Table 4-4
PSD Applicability

Proposed Emissions

Heater	EPN	NOx (tpy)	CO (tpy)	PM10 (tpy)	VOC (tpy)	SO2 (tpy)
No. 2 Asphalt Heater	H-5	10.51	1.48	0.53	0.21	0.49
No. 1 PDA Asphalt Heater	H-40	31.54	7.39	2.63	1.03	2.47
		42.05	**8.86**	**3.15**	**1.24**	**2.96**

2-Year Actual Emissions

Heater	EPN	NOx (tpy)	CO (tpy)	PM10 (tpy)	VOC (tpy)	SO2 (tpy)
No. 2 Asphalt Heater	H-5	7.14	1.00	0.36	0.14	0.05
No. 1 PDA Asphalt Heater	H-40	16.34	3.83	1.36	0.53	0.13
		23.47	**4.83**	**1.72**	**0.68**	**0.18**

Emission Changes

Heater	EPN	NOx (tpy)	CO (tpy)	PM10 (tpy)	VOC (tpy)	SO2 (tpy)
No. 2 Asphalt Heater	H-5	3.38	0.47	0.17	0.07	0.44
No. 1 PDA Asphalt Heater	H-40	15.20	3.56	1.27	0.50	2.34
Project Increases:		**18.58**	**4.04**	**1.44**	**0.56**	**2.78**
Storage Tank and Loading Allowable Emissions (Permit 32931):					**10.1**	
					10.66	
PSD Significance Level		40	100	15	40	40

5 Demonstration of Exemption Applicability

The information in this section demonstrates that the increased firing rates are exempt from the permitting requirements contained in 30 TAC Chapter 116 and meets the exemption from permitting requirements specified in 30 TAC Chapter 106.

General Requirements

§106.4(a)(1) The emissions of SO_x, PM, and VOC are less than 25 tpy. The emissions of CO and NO_x are less than 250 tpy as shown on Table 4-2.

§106.4(a)(2) The facility is not located in a nonattainment county.

§106.4(a)(3) As shown in Table 4-4, the increased firing rates will not increase pollutant quantities that trigger PSD review.

§106.4(a)(4) A facility at the property has had public notification and comment as required in 30 TAC 116.

§106.4(a)(5) The facilities meet the requirements of the exemptions in affect at the time of the increased firing rates.

§106.4(a)(6) The heaters are subject to and complies with the requirements of NSPS Subpart J.

§106.4(a)(7) There are no existing air quality permits at the site containing permit conditions, which prohibit or restrict the use of standard exemptions.

§106.4(b) There are no artificial limitations set at the facilities that would circumvent the requirements of §116.110.

§106.4(c) The facility operations will comply with all the rules and regulations of the TNRCC and the Texas Clean Air Act (TCAA), including the protection of health and physical property of the public.

§106.4(d) There are no local permitting or registration requirements.

§106.261 – Facilities (Emission Limitations)

The increased firing rates in the heaters meet the requirements of §106.261 as follows:

§106.261(1) The two heaters are currently authorized in Permit 9914; therefore, they were not authorized under another exemption. Therefore this requirement does not apply.

§106.261(2) The heaters are located at least 100 feet from any recreational area or residence or other property not occupied or used solely by the owner or operator of the facilities or by the owner or operator of the property upon which the facilities are located.

§106.261(3) Emission increases of SO_2, NO_x, CO, and VOC (refinery petroleum fractions) will be limited to 6.0 lb/hr and 10 tpy as shown in table 4-2.

§106.261(4) As shown in Table 4-2, total increased combustion particulate emissions will not exceed 1.0 lb/hr. Combustion particulate does not have L values referenced in Table 262 or a TLV, STEL, or C referenced in the 1997 ACGIH Handbook.

§106.261(5) There will be no changes to or additions of any air pollution abatement equipment.

§106.261(6) Visible emissions from the heater stacks will not exceed 5.0% opacity.

§106.261(7) A form PI-1-261 is included with this document..

§106.261(8-9) As shown in Table 4-2, total increased emissions from the increased firing rates are greater than 5 tpy; therefore, these requirements do not apply.

Appendix A

Precedent for Using §106.261 (SE 106) for Increased Firing of Combustion Units

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

December 5, 1995

Ms. Janetta D. Bowden
Group Leader
FINA OIL AND CHEMICAL COMPANY
P.O. Box 849
Port Arthur, Texas 77640

Re: Heaters 4H51 (EPN 192), 4H52 (EPN 193), and 4H53 (EPN 310)
Port Arthur, Jefferson County
Account ID No. JE-0005-H

Dear Ms. Bowden:

This is in response to your letter dated October 16, 1995 concerning three heaters at the HDS-Catalytic Reformer and Aromatic Complex servicing the Benzene, Toluene, and Xylene (BTX) process unit. We understand that Fina Oil and Chemical Company proposes to increase the firing rate of the three process heaters on the BTX unit while firing refinery fuel gas containing no more than 0.1 grain of total sulfur compounds. After evaluation of the information which you have furnished, we have determined that your project is exempt from the permit procedures under Standard Exemption Nos. 7 and 106 if constructed and operated as described in your letter.

These standard exemptions were authorized by the Executive Director pursuant to 30 TAC Section 116.211(a) of Regulation VI. Copies of the exemptions in effect at the time of this determination are enclosed. You must operate in accordance with all requirements of the enclosed standard exemptions.

You are reminded that regardless of whether a permit is required, these facilities must be in compliance with all air quality rules and regulations of the TNRCC and of the U.S. Environmental Protection Agency at all times.

If you have any questions concerning this exemption, please contact Ms. Roseanne H. Kaysen of our Office of Air Quality, New Source Review Division at (512) 239-1096.

Sincerely,

James E. Crocker, P.E.
Manager, Coatings and Combustion Section
New Source Review Division (MC-162)

JC/RK/ds

Enclosures

cc: Mr. Marion Everhart, Air Program Manager, Beaumont

Record No. 40255

November 15, 1995

Mr. Jeff Saitas, Director
Office of Air Quality
Texas Natural Resource Conservation Commission
MC-162, P.O. Box 13087
Austin, Texas 78711-3087

Re: Applicability of SE #106 and SE #118

Dear Mr. Saitas:

This letter is to request that you review a determination recently made by the NSR staff that a 50 MMBTU/hr heater can not use SE #106 or SE #118 to increase firing rate one BTU because heaters are authorized by SE #7 and conditions in SE #106 and SE #118 prohibit their use to construct or change a facility if that facility is "authorized in another standard exemption". This interpretation is not what was originally intended. I was involved in the exemption list revisions when this language was added and the intent was to address the following two scenarios:

1. The TACB staff did not want someone to be able to construct a new facility, for example a concrete batch plant, under SE #106 or 118 when concrete batch plants are authorized under SE #71 and #93. SE #71 and #93 require specific control equipment and dust emission suppression measures to be utilized. The staff was concerned that without a restriction on usage, a concrete bach plant could be constructed under SE #106 or #118 and the control measures be avoided or minimized.

2. Also, the TACB staff wanted to make it clear that a facility previously constructed under a SE could not be changed under one of the generic SE's. In other words, the conditions of the first SE must continue to be met exactly in order to continue to be authorized and can not be circumvented by another SE.

In summary, condition (a) of SE #106 and #118 was intended to prohibit their use to construct new facilities which are specifically authorized elsewhere on the SE list and to prohibit of an SE to authorize changes to facilities previously constructed under an SE. It was never intended to restrict the use of SE #106 or #118 to make changes to previously permitted or grandfathered facilities as this staff interpretation certainly does.

I will be happy to discuss this matter with you in detail at your request.

Sincerely

Jim Myers, P.E.

TEXAS NATURAL RE

Protecting Te

11/22/95

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To Jim Meyers	From Mary Barnett
Co. Jones & Neuse	Co.
Dept.	Phone # (409) 860-3399
Fax # (512) 327-6163	Fax #

November 14, 1995

Ms. Jannetta D. Bowden
Group Leader
FINA OIL & CHEMICAL COMPANY
P.O. Box 849
Port Arthur, Texas 77640

Re: HDS-Catalytic Reformer
and Aromatics Complex
Benzene, Toluene, and Xylene Heaters
Port Arthur, Jefferson County
Account ID No. JE-0005-H

Dear Ms. Bowden:

This is in response to your letter dated October 16, 1995 concerning the proposed increase in firing rates for the three process heaters serving the BTX process unit. The modification to Heater 4H51 (Emission Point No. [EPN] 192) can be authorized under Standard Exemption No. 7 if this heater will no longer be fired with fuel pitch. If this is the case, we ask that you submit a letter requesting alteration of Permit No. 5694 to reflect this change or include this request with an amendment application as discussed below.

The increased firing rates of Heaters 4H52 (EPN 193) and 4H53 (EPN 310) cannot be authorized under Standard Exemption No. 106 since the heaters do not meet the requirements of Standard Exemption No. 7 with or without fuel pitch firing. Standard Exemption No. 106 cannot be used to authorize any change to a facility specifically authorized in another standard exemption, but not meeting the requirements of that standard exemption. The increased firing of these heaters will require an amendment to Permit No. 5694.

You are reminded that Section 382.051(a) of the Texas Clean Air Act, Texas Health and Safety Code, Chapter 382, provides that a construction permit must be obtained or a standard exemption fully complied with "before work is begun on the construction of a new facility or modification of an existing facility that may emit air contaminants."

Your cooperation in this matter is appreciated. If you have further questions, please contact Mr. Angel Tomasino of our Office of Air Quality, New Source Review Division at (512) 239-1593.

Sincerely,

James E. Crocker, P.E.
Manager, Coatings and Combustion Section
New Source Review Division (MC-162)

JC/AT/sl

Enclosures

cc: Mr. Marion Everhart, Air Program Manager, Beaumont

Record No. 39181

FACSIMILE COVER SHEET

JONES & NEUSE
GULF COAST REGION OF RMT

912 Capital of Texas Highway South
Suite 300
Austin, Texas 78746
(512) 327-9840
Fax (512) 327-6163

Date: 11/9/95	Time: 8:30A	Job No:
Message To:	Jeff Saitas	
Firm:	TNRCC	
Facsimile No:	239-1123	
Message From:	Jim Myers	
Transmitted By:		
Number of pages (Including Cover Sheet):	1	

Additional Comments:

The TNRCC NSR staff has taken the position that a 41 MMBTU/hr heater with ultra-low NO_x burners can not increase the firing rate 1 BTU/hr without a permit or a permit amendment. They point to paragraph (a) of SE #106 and #118 which prohibits their use if a facility is authorized in another SE. Since SE #7 authorizes heaters up to 40 MMBTU/hr, a 41 MMBTU/hr heater cannot use SE #106 or #118 for <u>any</u> change. The intent of paragraph (a) was to prevent the construction of a facility which may meet the emission limits of #106 and #118 but did not meet the <u>control equipment</u> that may be specified in another SE for that type of facility. I know, I helped write it. Please call me. Could you or Victoria look into this?

Thanks

If difficulty is experienced in this transmission, please call (512) 327-9840.

cc: Victoria Hsu

October 16, 1995

FEDERAL EXPRESS

Ms. Victoria Hsu
Manager, Permit Section
Office of Air Quality
Texas National Resource Conservation Commission (TNRCC)
12100 Park 35 Circle
Austin, TX 78753

SUBJECT: **STANDARD EXEMPTION REGISTRATION**
HDS - CATALYTIC REFORMER AND AROMATICS COMPLEX
BENZENE, TOLUENE & XYLENE HEATERS 4H51, 4H52 AND 4H53
ACCOUNT NO. JE-0005-H

Dear Ms. Hsu:

This letter is to advise you of an increase in firing rates of the three heaters at the HDS - Catalytic Reformer and Aromatic Complex servicing the Benzene, Toluene, and Xylene (BTX) process unit. We believe this increase can be performed under Standard Exemption Numbers 7 and 106.

Fina Oil and Chemical Company proposes to increase the firing rate of the three process heaters on the BTX Unit. The increased firing rate will provide Fina greater flexibility in processing refined compounds. (There will not be an increase in emissions from downstream sources due to the increase in the heater firing rates.) Also, Fina recently installed ultra-low NOx burners on the three BTX heaters. The operation of this facility is governed by TNRCC Permit C-5694. The increase in heater firing rate of Heater 4H51 from 23 to 31.35 MMBtu/hr meets the requirements as outlined in TNRCC Standard Exemption Number 7 and the increase in heater firing rate of Heater 4H52 from 50 to 63 MMBtu/hr and Heater 4H53 from 56 to 63 MMBtu/hr meets the requirements as outlined in TNRCC Standard Exemption Number 106. Please find enclosed the documentation to support this claim.

Should additional information be required or questions arise, please contact me at (409)963-6881.

Sincerely,

Jannetta D. Bowden
Environmental Support
Group Leader - Air Quality

JDB/MEB:cf
Attachment
cc: Mr. Marion Everhart, Manager, Air Program, TNRCC, Beaumont, TX
bcc: Permit Book, Central Files (2)

Fina Oil and Chemical Company
Post Office Box 849 • Port Arthur, Texas 77641-0849 • (409) 962-4421 • (409) 962-8870 Fax

Appendix B

Vendor Emission Factors

Callidus Technologies Inc.

Burner Division
7130 South Lewis, Suite 635
Tulsa, Oklahoma 74136
Phone: (918) 496-7599
Fax: (918) 496-7597

TO:	Mr. Alan Upchurch	FROM:	Doyle Bishop
COMPANY:	Diamond Shamrock	DATE:	July 31, 1996
FAX NO.:	(210) 641-8856	PAGES:	2
CC:	EnviroPro		

RE: Process Heaters Emissions at McKee Refinery

We are pleased to confirm emissions levels based on the following process/equipment data:

Bridgewall Temperature - ~1600°F
Combustion Air Temperature - Ambient
Excess Air Level - 15%
Firing Orientation - Floor, up-shot
Burner Type - LE-CSG (Flue Gas Recirculation)
Refinery Gas Composition -

Component	Mole %
He	0.213
CO_2	--
N_2	5.849
H_2	38.346
C_1	41.861
$C_2=$	4.835
C_2	6.690
$C_3=$	--
C_3	1.419
IC_4	0.305
NC_4	0.225
IC_5	0.090
NC_5	0.030
C_6	0.130
H_2S	0.007

We will guarantee the following emissions based on fuel LHV fired:

VOC	0.00393	#/MMBtu
NO_X	0.04	#/MMBtu
PM_{10}	0.01	#/MMBtu
CO	0.02811	#/MMBtu

If you need additional assistance or clarification please feel free to contact me.