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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD JUN 02 2004  
OF THE STATE OF ILLINOIS

STATE OF ILLINOIS  
Pollution Control Board

CONOCOPHILLIPS COMPANY )  
Low Sulfur Gasoline Project – Wood River Refinery )  
)  
)  
PROPERTY IDENTIFICATION NUMBER )  
19-1-08-35-00-000-001 )

PCB 04- 214  
(Tax Certification)

NOTICE

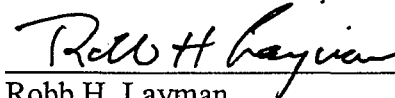
TO: Dorothy Gunn, Clerk  
Illinois Pollution Control Board  
State of Illinois Center  
100 W. Randolph Street, Suite 11-500  
Chicago, Illinois 60601

Michael Kemp  
ConocoPhillips Company  
404 Phillips Building  
Bartlesville, Okalahoma 74004

Steve Santarelli  
Illinois Department of Revenue  
101 West Jefferson  
P.O. Box 19033  
Springfield, Illinois 62794

PLEASE TAKE NOTICE that I have today filed with the Office of the Pollution Control Board the APPEARANCE and RECOMMENDATION of the Illinois Environmental Protection Agency, a copy of which is herewith served upon the applicant, ConocoPhillips Company, and a representative of the Illinois Department of Revenue.

Respectfully submitted by,



Robb H. Layman  
Special Assistant Attorney General

Date: June 1, 2004

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794-9276  
Telephone: 217/782-5544  
Facsimile: 217/782-9807

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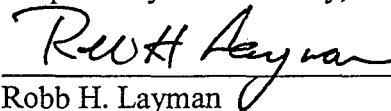
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Low Sulfur Gasoline Project – Wood River Refinery )  
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PROPERTY IDENTIFICATION NUMBER )  
19-1-08-35-00-000-001 )

PCB 04- 214  
(Tax Certification)

APPEARANCE

I hereby file my Appearance in this proceeding on behalf of the Illinois Environmental Protection Agency.

Respectfully submitted by,



Robb H. Layman  
Special Assistant Attorney General

Date: June 1, 2004

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19-1-08-35-00-000-001 )

RECOMMENDATION

NOW COMES the ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (“Illinois EPA”), through its attorneys, and pursuant to 35 Ill. Adm. Code 125.204 of the ILLINOIS POLLUTION CONTROL BOARD’S (“Board”) procedural regulations, files the Illinois EPA’s Recommendation in the above-referenced request for tax certification of pollution control facilities. In support thereof, the Illinois EPA states as follows:

1. On December 31, 2003, the Illinois EPA received a request and supporting information from CONOCOPHILLIPS COMPANY (“ConocoPhillips”) concerning the proposed tax certification of certain air emission sources and/or equipment located at its Wood River Refinery in Madison County, Illinois. A copy of the relevant portions of the application is attached hereto. [Exhibit A].

2. The applicant’s address is as follows:

ConocoPhillips Company  
900 South Central Avenue,  
P.O. Box 76  
Roxana, Illinois 62084

3. The pollution control facilities involved in this request are located at the aforementioned address and consist of the installation of new and/or modified equipment,

described as the Low Sulfur Gasoline project, that will allow the Wood River Refinery to produce lower-sulfur gasoline, thus reducing sulfur dioxide emissions. The emission reductions are required by the United States Environmental Protection Agency's Tier 2 regulations. The initial phase of the project will allow the Wood River Refinery to produce lower sulfur gasoline by 2004 and will be accomplished by the desulfurization of light catalytic naphtha, heavy catalytic naphtha and light straight run gasoline.

4. The Illinois EPA issued the Wood River Refinery a joint construction and operating permit for the first phase of the Tier 2 project on June 13, 2002. **[Exhibit B]**. Additional details concerning the nature of the project are included therein.

5. Section 11-10 of the Property Tax Code, 35 ILCS 200/11-10 (2002), defines "pollution control facilities" as:

"any system, method, construction, device or appliance appurtenant thereto, or any portion of any building or equipment, that is designed, constructed, installed or operated for the primary purpose of: (a) eliminating, preventing, or reducing air or water pollution... or (b) treating, pretreating, modifying or disposing of any potential solid, liquid, gaseous pollutant which if released without treatment, pretreatment, modification or disposal might be harmful, detrimental or offensive to human, plant or animal life, or to property."

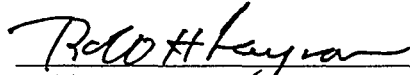
6. Pollution control facilities are entitled to preferential tax treatment, as provided by 35 ILCS 200/11-5 (2002).

7. Based on information in the application and the underlying purpose of the Low Sulfur Gasoline project to prevent, eliminate or reduce air pollution, it is the Illinois EPA's engineering judgment that the described project and/or equipment may be considered as "pollution control facilities" in accordance with the statutory definition and consistent with the Board's regulations at 35 Ill. Adm. Code 125.200.

8. Because the Low Sulfur Gasoline project and/or equipment satisfy the  
aforementioned criteria, the Illinois EPA recommends that the Board issue the applicant's  
requested tax certification.

Respectfully submitted by,

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY



Robb H. Layman

Special Assistant Attorney General

DATED: June 1, 2004

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 North Grand Avenue East

P.O. Box 19276

Springfield, Illinois 62794-9276

Telephone: 217/782-5544

Facsimile: 217/782-9807

THIS FILING IS SUBMITTED ON RECYCLED PAPER

**CERTIFICATE OF SERVICE**

I hereby certify that on the 1<sup>st</sup> day of June, 2004, I did send, by First Class Mail, with postage thereon fully paid and deposited into the possession of the United States Postal Service, one (1) original and nine (9) copies of the following instruments entitled **NOTICE,**

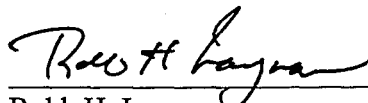
**APPEARANCE and RECOMMENDATION to:**

Dorothy Gunn, Clerk  
Illinois Pollution Control Board  
100 West Randolph Street  
Suite 11-500  
Chicago, Illinois 60601

and a true and correct copy of the same foregoing instruments, by First Class Mail with postage thereon fully paid and deposited into the possession of the United States Postal Service, to:

Steve Santarelli  
Illinois Department of Revenue  
101 West Jefferson  
P.O. Box 19033  
Springfield, Illinois 62794

Michael Kemp  
ConocoPhillips Company  
404 Phillips Building  
Bartlesville, Oklahoma 74004

  
By: Robb H. Layman  
Special Assistant Attorney General

This filing is submitted on recycled paper.



119090 AAA  
7C-03-12-31

Michael Kemp  
PTRRC Agent  
510G Plaza Office Building  
Bartlesville OK 74004  
Phone: 918 661-9055  
Fax: (918) 662-2212  
Michael.D.Kemp@conocophillips.com

December 30, 2003

Mr. Don Sutton  
Division of Air Pollution Control  
Illinois EPA  
1021 North Grand Avenue East  
Springfield, IL 62701

RE: Application for Certification  
Low Sulfur Gasoline Project

Dear Mr. Sutton;

Attached is a completed Application for Certification (Property Tax Treatment) for the low sulfur gasoline project at the Wood River Refinery in Madison County IL.

As advised in the application, Mr. Neal Sahni, (phone number 618-255-2478) can answer technical questions related to the application. Any questions regarding values or financial information should be addressed to me.

I look forward to talking with you.

Sincerely,

Michael Kemp

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DEC 31 2003

**IEPA - DAPC - SPFLD**

— Exhibit A —

APPLICATION FOR CERTIFICATION (PROPERTY TAX TREATMENT)  
 POLLUTION CONTROL FACILITY  
 AIR  WATER

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
 P. O. Box 19276, Springfield, IL 62794-9276

This Agency is authorized to request this information under Illinois Revised Statutes, 1979, Chapter, 120, Section 502a-5. Disclosure of this information is voluntary. However, failure to comply could prevent your application from being processed or could result in denial of your application for certification.

FOR AGENCY USE

File No.	Date Received	Certification No.	Date	
Sec. A  APPLICANT	Company Name ConocoPhillips Company			
	Person Authorized to Receive Certification Michael Kemp		Person to Contact for Additional Details Neal Sahn	
	Street Address 404 Phillips Building		Street Address 900 S. Central Ave., P. O. Box 76	
	Municipality, State & Zip Code Bartlesville, OK 74004		Municipality, State & Zip Code Roxana, IL 62084	
	Telephone Number 918-661-9055		Telephone Number 618-255-2478	
	Location of Facility Quarter Section	Township	Range	Municipality Township
	Street Address 900 S. Central Ave.		County Madison	Book Number
	Property Identification Number		Parcel Number 19-1-08-35-00-000-001	
Sec. B  MANUFACTURING OPERATIONS	Nature of Operations Conducted at the Above Location  Petroleum Refining			
	Water Pollution Control Construction Permit No. N/A		Date Issued	
	NPDES PERMIT No. N/A		Date Issued	Expiration Date
	Air Pollution Control Construction Permit No. 01120044		Date Issued June 13, 2002	
	Air Pollution Control Operating Permit No. 01120044		Date Issued June 13, 2002	
Sec. C  MANUFACTURING PROCESS	Describe Unit Process  Hydrotreating intermediate petroleum products.			
	Materials Used in Process  Crude oil and/or its petroleum derivatives, water, catalysts, hydrogen and chemical additives.			
Sec. D  POLLUTION CONTROL FACILITY DESCRIPTION	Describe Pollution Abatement Control Facility			
	<p>USEPA's Tier II regulations require refineries to limit the sulfur content of gasoline to a maximum of 30 parts per million by weight (ppmw) on an annual basis. The Wood River Refinery plans to meet the required Tier II gasoline specifications through a combination of installation of new equipment and the revamping of existing equipment.</p> <p>The LSG project is divided into two phases. Phase I of the project focuses on the desulfurization of the Light Catalytic Naphtha (LCN), Heavy Catalytic Naphtha (HCN), and Light Straight Run (LSR) Gasoline.</p>			

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IEPA, DAPC, SPFLD



POLLUTION CONTROL FACILITY - CONTAMINANTS  ACCOUNTING DATA	Sec. E	(1) Nature of Contaminants or Pollutants		
			Material Retained, Captured or Recovered	
		Contaminant or Pollutant	DESCRIPTION	DISPOSAL OR USE
		Sulfur (low sulfur gasoline)	Sulfur Dioxide	Sold as elemental sulfur
		(2) Point(s) of Waste Water Discharge		
		Plans and Specifications Attached		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
		(3)	Are contaminants (or residues) collected by the control facility?	
		(4)	Date installation completed <u>9/30/2003</u> status of installation on date of application <u>Operating</u>	
		(5)	a. FAIR CASH VALUE IF CONSIDERED REAL PROPERTY:	\$ <u>70,425,000</u>
		b. NET SALVAGE VALUE IF CONSIDERED REAL PROPERTY:	\$ <u>3,500,000</u>	
		c. PRODUCTIVE GROSS ANNUAL INCOME OF CONTROL FACILITY:	\$ <u>2,500,000</u>	
		d. PRODUCTIVE NET ANNUAL INCOME OF CONTROL FACILITY:	\$ <u>0</u>	
		e. PERCENTAGE CONTROL FACILITY BEARS TO WHOLE FACILITY VALUE:	<u>% 9.6%</u>	
SIGNATURE	Sec. F	The following information is submitted in accordance with the Illinois Property Tax Code, as amended, and to the best of my knowledge, is true and correct. The facilities claimed herein are "pollution control facilities" as defined in Section 11-10 of the Illinois Property Tax Code.		
		<u>Michael Kemp</u> Signature	<u>Property Tax, Real Estate, Right of Way</u> Title <u>&amp; Claims Agent</u>	
INSTRUCTIONS	Sec. G	INSTRUCTIONS FOR COMPILING AND FILING APPLICATION		
		General: Separate applications must be completed for each control facility claimed. Do not mix types (water and air). Where both air and water operations are related, file two applications. If attachments are needed, record them consecutively on an index sheet.		
	Sec. A	Information refers to applicant as listed in the tax records and the person to be contacted for further details or for inspection of facilities. Define facility location by street address or legal description. A plat map location is required for facilities located outside of municipal boundaries. The property identification number is required.		
	Sec. B	Self-explanatory. Submit copies of all permits issued by local pollution control agencies. (e.g. MSD Construction Permit)		
	Sec. C	Refers to manufacturing processes or materials on which pollution control facility is used.		
	Sec. D	Narrative description of the pollution control facility, indicating that its primary purpose is to eliminate, prevent or reduce pollution. State the type of control facility. State permit number, date, and agency issuing permit. A narrative description and a process flow diagram describing the <u>pollution control facility</u> . Include a listing of each major piece of equipment included in the claimed fair cash value for real property. Include an <u>average</u> analysis of the influent and effluent of the control facility stating the collection efficiency.		
	Sec. E	List air contaminants, or water pollution substances released as effluents to the manufacturing processes. List also the final disposal of any contaminants removed from the manufacturing processes. Item (1) - Refers to pollutants and contaminants removed from the process by the pollution control facility. Item (2) - Refers to water pollution but can apply to water-carried wastes from air pollution control facilities. Submit drawings, which clearly show (a) Point(s) of discharge to receiving stream, and (b) Sewers and process piping to and from the control facility. Item (3) - If the collected contaminants are disposed of other than as wastes, state the disposition of the materials, and the value in dollars reclaimed by sale or reuse of the collected substances. State the cost of reclamation and related expense. Item (4) - State the date which the pollution control facility was first placed in service and operated. If not, explain. Item (5) - This information is essential to the certification and assessment actions. This accounting data must be completed to activate project review prior to certification by this Agency.		
	Sec. F	Self-explanatory. Signature must be a corporate authorized signature.		
		Submit to:	Attention:	Attention:
		Illinois EPA P.O. Box 19276 Springfield, IL 62794-8276	Thomas McSwiggan Permit Section Division of Water Pollution Control	Donald E. Sutton Permit Section Division of Air Pollution Control



# ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

P.O. Box 19506, SPRINGFIELD, ILLINOIS 62794-9506

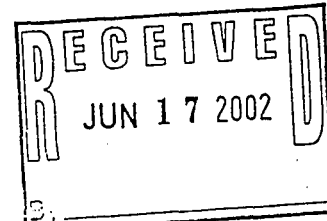
RENEE CIPRIANO, DIRECTOR

217/782-2113

JOINT CONSTRUCTION AND OPERATING PERMIT - NSPS SOURCE - NESHAP SOURCE

PERMITTEE

Wood River Refinery  
Attn: Gina P. Nicholson  
P.O. Box 76  
Roxana, Illinois 62084



Application No.: 01120044  
Applicant's Designation: WRR-69  
Subject: Tier 2 Project  
Date Issued: June 13, 2002

I.D. No.: 119090AAA  
Date Received: December 28, 2001

Operating Permit Expiration  
Date: June 13, 2007

Location: 900 South Central Avenue, Roxana

This Permit is hereby granted to the above-designated Permittee to CONSTRUCT and OPERATE emission source(s) and/or air pollution control equipment consisting of a the first phase of a Tier 2 project, that is, various changes to the refinery to produce lower sulfur gasoline, as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1.0 Unit Specific Conditions
  - 1.1 Unit: Tier 2 Project
    - 1.1.1 Description

This construction permit is the first phase of a single project that will allow the refinery to produce lower sulfur gasoline by 2004, as required by the USEPA Tier 2 gasoline sulfur requirements. Phase 1 will accomplish desulfurization of light catalytic naphtha (LCN), heavy catalytic naphtha (HCN), and light straight run (LSR) gasoline.

The catalytic naphtha splitter will fractionate feed into light, intermediate, and heavy catalytic naphthas. Reboilers required in this process will demand additional steam from the existing boiler 17.

HCN will feed the new heavy catalytic naphtha hydrotreater (HCNHT), which uses hydrodesulfurization to reduce the sulfur content of gasoline. Existing heater F-1 will be modified to effectively heat the feed to the reactor.

The light oil treater-east train (ELOT) will be modified to reduce the sulfur content of the LCN from the CNS and other streams through the use of caustic technology. Installation of a new LOT flare will remove hydrocarbon rich vent gas from this process.

The gasoline hydrotreater (GHT) will be modified so that it can hydrotreat LSR gasoline. As a result, the existing alky HM-1 heater will have to fire at a higher rate. There will be additional sulfur loading to the Sulfur Plant from the Tier 2 (Phases 1 and 2), however, the Sulfur Plant will continue to operate within its design capacity.

These modifications will not result in an increase in crude throughput.

1.1.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
CNS	Catalytic Naphtha Splitter	None
HCNHT	Heavy Catalytic Naphtha Hydrotreater	None
ELOT	Modification to the Light Oil Treater - East Train for Caustic Extraction Section and Addition of New Caustic Regeneration Section	LOT Flare
GHT	Gasoline Hydrotreater	None
Fugitives	Fugitive Emissions from New Components Associated with the Tier 2 Project	None

1.1.3 Applicability Provisions and Applicable Regulations

- a. An "affected fuel gas combustion device" for the purpose of these unit-specific conditions, is the F-1 Charge Heater and the new LOT Flare as described in Conditions 1.1.1 and 1.1.2.
  - i. A. This permit is issued based upon the affected fuel gas combustion devices being subject to the NSPS for Petroleum Refineries, 40 CFR 60 Subparts A and J. The Illinois EPA administers the NSPS for subject sources in Illinois pursuant to a delegation agreement with the USEPA.
  - B. The Permittee shall not burn in the affected fuel gas combustion device any fuel gas that contains hydrogen sulfide (H<sub>2</sub>S) in excess of 230 mg/dscm (0.10 gr/dscf). The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency

malfunctions is exempt from this paragraph [40 CFR 60.104(a)(1)].

- ii. A. The Permittee shall not cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from the F-1 Charge Heater except as provided below [35 IAC 212.123(a)].
  - B. The emission of smoke or other particulate matter from the F-1 Charge Heater may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1,000 ft) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period [35 IAC 212.123(b)].
  - iii. The Permittee shall not cause or allow the emission of carbon monoxide (CO) into the atmosphere from the F-1 Charge Heater to exceed 200 ppm, corrected to 50 percent excess air [35 IAC 216.121].
- b. This permit is issued based upon the equipment leaks associated with CNS Unit, HCNHT Unit, and EL0T being subject to the Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, 40 CFR 60, Subparts A and VV. The Illinois EPA administers the NSPS for subject sources in Illinois pursuant to a delegation agreement with the USEPA. The Permittee shall comply with all applicable requirements of 40 CFR 60, Subpart VV and 40 CFR 63, Subpart CC.

Note: Applicability of Subpart VV is triggered because the refinery is subject to the National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries, 40 CFR 63, Subparts A and CC and the Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries, 40 CFR 60, Subparts A and GGG. The Permittee has indicated that they will

comply with the equipment leak requirements specified in 40 CFR 63, Subpart CC and 40 CFR 60, Subpart GGG by complying with 40 CFR 60, Subpart VV.

- c. i. This permit is issued based upon the caustic regenerator vent associated with the ELOT being subject to the National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries, 40 CFR 63, Subparts A and CC. The Illinois EPA administers the NESHAP for subject sources in Illinois pursuant to a delegation agreement with the USEPA. The Permittee shall comply with all applicable requirements of 40 CFR 63, Subpart CC.
- ii. The Permittee shall reduce emissions of organic HAP's from the caustic regenerator vent using a flare that meets the requirements of 40 CFR 63.11(b) [40 CFR 63.643(a)(1)].

1.1.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the F-1 Charge Heater not being subject to 40 CFR 60 Subpart Db, NSPS for Industrial-Commercial-Institutional Steam Generating Units because the F-1 Charge Heater is not a steam generating unit.
- b. This permit is issued based on the Tier 2 project not being subject to NSPS for Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems, 40 CFR 60 Subpart QQQ, because no new or modified individual drain systems will be added as part of the Tier 2 project.
- c. The source has addressed the applicability and compliance of 40 CFR 52.21, Prevention of Significant Deterioration (PSD) and 35 IAC Part 203, Major Stationary Sources Construction and Modification (See Attachment 1). The limits established by this permit are intended to ensure that the modification addressed in this construction permit does not constitute a major modification pursuant to these rules.
- d. Compliance with 40 CFR 60, Subpart VV shall serve as the Alternative Program for Leaks as allowed by 35 IAC 219.450.

1.1.5 Operational and Production Limits and Work Practices

- a. i. The firing rate of the F-1 Charge Heater shall not exceed 25.0 mmBtu/hr (daily average).
- ii. The quantity of gas burned in the LOT Flare shall not exceed 58.7 mmscf/yr.
- iii. Only gaseous fuels shall be burned in the F-1 Charge Heater and the LOT flare.
- b. This permit is issued based on the Boiler 17 firing at an increase rate (additional 132 mmBtu/hr) due to increased steam demand for the new naphtha splitter column reboilers (T-5032/T-5033). Note: the Boiler 17 will continue to operate within its designed capacity.
- c. This permit is issued based on the alky HM-1 heater firing at an increase rate (additional 7.93 mmBtu/hr) to preheat the feed entering the GHT. Note: the alky HM-1 heater will continue to operate within its designed capacity.
- d. These requirements, and the emission limitations in Condition 1.1.6, become effective following completion of the Tier 2 Project when the Refinery first begins to process low-sulfur gasoline for commercial sale.

1.1.6 Emission Limitations

- a. i. Emissions from the HCNHT F-1 Charge Heater shall not exceed the following limits:

<u>Pollutant</u>	<u>Emissions</u>	
	<u>(Ton/Mo)</u>	<u>(Tons/Year)</u>
NO <sub>x</sub>	0.90	10.74
SO <sub>2</sub>	0.01	0.06
CO	0.76	9.02
VOM	0.05	0.59
PM/PM <sub>10</sub>	0.07	0.82

- ii. Emissions from LOT flare shall not exceed the following limits:

<u>Pollutant</u>	<u>Emissions</u>	
	<u>(Tons/Mo)</u>	<u>(Tons/Year)</u>
NO <sub>x</sub>	0.29	2.03
SO <sub>2</sub>	2.58	18.06
CO	1.58	11.04
VOM	0.60	4.18

- b. Emissions of VOM from the new components (i.e., valves, pumps, flanges, etc.) associated with the Tier 2 Project shall not exceed 29.55 tons per year. This value shall be divided by 12 to calculate a monthly emission rate for purposes of Condition 1.1.6(f).
- c. This permit is issued based upon emissions attributable to the additional steam load (required by naphtha splitter column reboilers T-5032/T-5033) placed on the Boiler 17 as follows:

<u>Pollutant</u>	<u>Emissions (Tons/Year)</u>
NO <sub>x</sub>	83.03
SO <sub>2</sub>	2.89
CO	47.77
VOM	3.13
PM/PM <sub>10</sub>	4.32

The NO<sub>x</sub> and SO<sub>2</sub> emissions shall be calculated using a continuous emission monitor, and the CO, PM, and VOM emissions shall be calculated using USEPA emission factors.

- d. This permit is issued based upon emissions attributable to the heat input required to preheat the feed entering the GHT Unit as follows:

<u>Pollutant</u>	<u>Emissions (Tons/Year)</u>
NO <sub>x</sub>	3.42
SO <sub>2</sub>	0.17
CO	2.87
VOM	0.19
PM/PM <sub>10</sub>	0.26

The SO<sub>2</sub> emissions shall be calculated using a continuous emission monitor, and the NO<sub>x</sub>, CO, PM, and VOM emissions shall be calculated using USEPA emission factors.

- e. This permit is issued based upon emissions attributable to the additional sulfur loading placed on the Sulfur Plant as follows:

<u>Pollutant</u>	<u>Emissions (Tons/Year)</u>
SO <sub>2</sub>	6.81

Note: This emission rate represents the additional loading to the sulfur plant from both Phase 1 and 2 of the Tier 2 project.

- f. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).

#### 1.1.7 Testing Requirements

##### Hydrogen Sulfide Testing

In accordance with 40 CFR 60.8, within 60 days after achieving the maximum production rate at which the affected fuel gas combustion devices will be operated, but not later than 180 days after initial startup of the affected fuel gas combustion devices and at such other times as may be required by the Illinois EPA, the Permittee shall conduct performance test(s) in accordance with 40 CFR 60.106(e) and furnish the Illinois EPA a written report of the results of such performance test(s).

Note: The hydrogen sulfide testing requirement is not necessary if the H<sub>2</sub>S content of the fuel gas to the affected heaters is monitored by an existing CEM.

#### 1.1.8 Monitoring Requirements

- a. i. The Permittee shall comply with the monitoring requirements specified in 40 CFR 60.105 for the affected fuel gas combustion devices by installing, calibrating, maintaining and operating an instrument for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in fuel gases before being burned in the affected fuel gas combustion devices.
- ii. Pursuant to 40 CFR 60.13(i), after receipt and consideration of written application, the USEPA may approve alternative monitoring procedures.
- b. For the affected fuel gas combustion devices, the Permittee shall determine compliance with the H<sub>2</sub>S standard in 40 CFR 60.104(a)(1) as follows: Method 11, 15, 15A, or 16 shall be used to determine the H<sub>2</sub>S concentration in the fuel gas. The gases entering the sampling train should be at about atmospheric pressure. If the pressure in the refinery fuel gas



lines is relatively high, a flow control valve may be used to reduce the pressure. If the line pressure is high enough to operate the sampling train without a vacuum pump, the pump may be eliminated from the sampling train. The sample shall be drawn from a point near the centroid of the fuel gas line [40 CFR 60.106(e)(1)].

- c. For the affected fuel gas combustion devices, the Permittee shall maintain records of the concentration (dry basis) of H<sub>2</sub>S in fuel gases before being burned in the affected heaters to demonstrate compliance with Condition 1.1.3(a)(i)(B).

#### 1.1.9 Recordkeeping Requirements

- a. The Permittee shall maintain records of the following items:
  - i. Firing rate of the F-1 Charge Heater (mmBtu/hr on a daily average);
  - ii. The quantity of gas burned in the LOT Flare (mmscf/month);
  - iii. Steam demand for the naphtha splitter column reboilers (T-5032/T-5033) from Boiler 17 (lb/hr, daily average);
  - iv. Emissions of NO<sub>x</sub>, CO, VOM, SO<sub>2</sub>, PM and PM<sub>10</sub> from Boiler 17 attributable to the additional steam demand required by the naphtha splitter column reboilers (T-5032/T-5033) (tons/month and tons/year);
  - v. Emissions of NO<sub>x</sub>, CO, VOM, SO<sub>2</sub>, PM and PM<sub>10</sub> from the alky HM-1 heater attributable to the increased firing rate required to preheat the feed to the GHT (tons/month and tons/year); and
  - vi. Emissions of NO<sub>x</sub>, CO, VOM, SO<sub>2</sub>, PM and PM<sub>10</sub> from the affected fuel gas combustion devices (tons/month and tons/year).
- b. The Permittee shall maintain records of the following items for fugitive emissions from components associated with the Tier 2 project:
  - i. Number of new components by unit or location and type in the Tier 2 Project; and

ii. Calculated VOM emissions including supporting calculations, attributable to these components (tons/year), based on the methods in Condition 1.1.12(c).

c. The Permittee shall maintain records of the amount of sulfur attributable to the Tier 2 Project (Phases 1 and 2) loading to the Sulfur Plant (long ton sulfur/month and long ton sulfur/year).

1.1.10 Reporting Requirements

a. The Permittee shall notify the Illinois EPA of deviations of permit requirements as follows. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

b. For affected fuel gas combustion devices, the Permittee shall comply with the reporting requirements specified in 40 CFR 60.107(e) and (f) and 40 CFR 60.105(e) (3).

1.1.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

1.1.12 Compliance Procedures

a. Compliance with the particulate matter and carbon monoxide emission limitations specified in Conditions 1.1.3(a)(ii) and 1.1.3(a)(iii), respectively, is considered inherent in the normal operation of the F-1 Charge Heater firing refinery fuel gas or natural gas.

b. i. Compliance with the SO<sub>2</sub> limits in Condition 1.1.6(a)(ii) shall be based on the operating records required by Condition 1.1.9 and the sulfur or H<sub>2</sub>S content of refinery fuel gas as monitored in accordance with Condition 1.1.8.

ii. Compliance with the emission limits in Condition 1.1.6(a)(i) for the F-1 Charge Heater shall be based on the operating records required by Condition 1.1.9 and appropriate emission factors:

<u>Pollutant</u>	<u>Emission Factor</u> <u>(Lbs/mmscf)</u>
NO <sub>x</sub>	100
CO	84
VOM	5.5
PM/PM <sub>10</sub>	7.6
SO <sub>2</sub>	0.6

Note: the 0.6 lb/mmscf emission factor for SO<sub>2</sub> is appropriate for combustion of natural gas; however, if refinery fuel gas is burned, emissions shall be calculated using operating records and the sulfur or H<sub>2</sub>S content of the refinery fuel gas.

- iii. Compliance with the NO<sub>x</sub>, CO, and VOM emission limits in Condition 1.1.6(a)(ii) for the LOT flare shall be based on the operating records required by Condition 1.1.9 and appropriate emission factors:

<u>Pollutant</u>	<u>Emission Factor (Lbs/mmscf)</u>
CO	376.14
VOM	142.32
NO <sub>x</sub>	69.13

- c. Compliance with the emission limits for VOM leaks in Condition 1.1.6(b) shall be based on the recordkeeping requirements in Condition 1.1.9(b) and applicable standard emission estimate methodology published by USEPA in "Protocol for Equipment Leak Emission Estimates", EPA-453/R-95-017 (November 1995).

Please note that the Permittee should update their CAAPP application to include this equipment by submitting form 505-CAAPP - "Supplement to CAAPP Application" along with all other appropriate information.

If you have any questions on this permit, please contact Jason Schnepf at 217/782-2113.

*Donald E. Sutton*

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:JMS:jar

cc: Region 3

Attachment 1

PSD Applicability - NO<sub>x</sub> Netting Analysis

Contemporaneous Time Period of October 1997 Through October 2002

Table I - Emissions Increases and Decreases Associated With The Proposed Modification

<u>Item of Equipment</u>	<u>Past Actual (Tons/Yr)</u>	<u>Future Potential (Tons/Yr)</u>	<u>Emissions Change (Tons/Year)</u>	<u>Permit Number</u>
Boiler 17 Utilization	*	*	83.03	00120044
F-1 Charge Heater (Modified)	0.00	10.74	10.74	00120044
Alky HM-1 Heater	*	*	3.42	00120044
LOT Flare	0.00	2.03	<u>2.03</u>	00120044
		Total:	99.22	

Table II - Source-Wide Creditable Contemporaneous Emission Increases

<u>Item of Equipment</u>	<u>Commencement of Operation Date</u>	<u>Emissions Increase (Tons/Year)</u>	<u>Permit Number</u>
RAU Deethanizer Reboiler Project	October 2001	24.82	01060090

Table III - Source-Wide Creditable Contemporaneous Emission Decreases

<u>Item of Equipment</u>	<u>Commencement of Operational Change Date</u>	<u>Emissions Decrease (Tons/Year)</u>	<u>Permit Number</u>
Boiler 15 (Fuel Switch)	July 1999	24.55	92110025
Boiler 16 (Fuel Switch)	July 1999	36.24	92110025
DU-2 Mixed Crude Heater West, F-202 (Fuel Switch)	May 2000	17.82	92110025
DU-2 Mixed Crude Heater East, F-203 (Fuel Switch)	May 2000	20.18	92110025
CDU Charge Heater Shutdown	September 1999	3.25	72110625
DAU Oil Heater Shutdown	September 1999	1.51	72110625
DAU Asphalt Solution Heater Shutdown	September 1999	1.80	72110625
RAU Deethanizer Heater Shutdown	October 2001	<u>19.60</u>	01060090
	Total:	124.95	

Table IV - Net Emissions Change

	<u>(Tons/Year)</u>
Increases and Decreases Associated With The Proposed Modification	99.22
Creditable Contemporaneous Emission Increases	24.82
Creditable Contemporaneous Emission Decreases	<u>- 124.95</u>
	- 0.91

\* These units, which have historically been capable of firing at maximum capacity, will not be increasing capacity. However, both units will realize a quantifiable incremental increase in utilization.



STATE OF ILLINOIS  
ENVIRONMENTAL PROTECTION AGENCY  
DIVISION OF AIR POLLUTION CONTROL  
P. O. BOX 19506  
SPRINGFIELD, ILLINOIS 62794-9506

**STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS  
ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**

July 1, 1985

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) authorizes the Environmental Protection Agency to impose conditions on permits which it issues.

The following conditions are applicable unless superseded by special condition(s).

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year from the date of issuance, unless a continuous program of construction or development on this project has started by such time.
2. The construction or development covered by this permit shall be done in compliance with applicable provisions of the Illinois Environmental Protection Act and Regulations adopted by the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
4. The permittee shall allow any duly authorized agent of the Agency upon the presentation of credentials, at reasonable times:
  - a. to enter the permittee's property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit,
  - b. to have access to and to copy any records required to be kept under the terms and conditions of this permit,
  - c. to inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit,
  - d. to obtain and remove samples of any discharge or emissions of pollutants, and
  - e. to enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
5. The issuance of this permit:
  - a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located,
  - b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities,
  - c. does not release the permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations,
  - d. does not take into consideration or attest to the structural stability of any units or parts of the project, and

- e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
6. a. Unless a joint construction/operation permit has been issued, a permit for operation shall be obtained from the Agency before the equipment covered by this permit is placed into operation.
- b. For purposes of shakedown and testing, unless otherwise specified by a special permit condition, the equipment covered under this permit may be operated for a period not to exceed thirty (30) days.
7. The Agency may file a complaint with the Board for modification, suspension or revocation of a permit:
- a. upon discovery that the permit application contained misrepresentations, misinformation or false statements or that all relevant facts were not disclosed, or
  - b. upon finding that any standard or special conditions have been violated, or
  - c. upon any violations of the Environmental Protection Act or any regulation effective thereunder as a result of the construction or development authorized by this permit.



STATE OF ILLINOIS  
ENVIRONMENTAL PROTECTION AGENCY  
DIVISION OF AIR POLLUTION CONTROL  
P.O. BOX 19506  
SPRINGFIELD, ILLINOIS 62794-9506

STANDARD CONDITIONS  
FOR  
OPERATING PERMITS

May, 1993

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

The following conditions are applicable unless superseded by special permit conditions(s).

1. The issuance of this permit does not release the Permittee from compliance with state and federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois or with applicable local laws, ordinances and regulations.
2. The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be ground for revocation under 35 Ill. Adm. Code 201.166.
3.
  - a. The Permittee shall not authorize, cause, direct or allow any modification, as defined in 35 Ill. Adm. Code 201.102, of equipment, operations or practices which are reflected in the permit application as submitted unless a new application or request for revision of the existing permit is filed with the Illinois EPA and unless a new permit or revision of the existing permit(s) is issued for such modification.
  - b. This permit only covers emission sources and control equipment while physically present at the indicated plant location(s). Unless the permit specifically provides for equipment relocation, this permit is void for an item of equipment on the day it is removed from the permitted location(s) or if all equipment is removed, notwithstanding the expiration date specified on the permit.
4. The Permittee shall allow any duly authorized agent of the Illinois EPA, upon the presentation of credentials, at reasonable times:
  - a. To enter the Permittee's property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit;
  - b. To have access to and to copy any records required to be kept under the terms and conditions of this permit;
  - c. To inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit;
  - d. To obtain and remove samples of any discharge or emission of pollutants; and
  - e. To enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring or recording any activity, discharge or emission authorized by this permit.
5. The issuance of this permit:
  - a. Shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are located;



- b. Does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the facilities;
  - c. Does not take into consideration or attest to the structural stability of any unit or part of the project; and
  - d. In no manner implies or suggests that the Illinois EPA (or its officers, agents, or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
6. The facilities covered by this permit shall be operated in such a manner that the disposal of air contaminants collected by the equipment shall not cause a violation of the Environmental Protection Act or regulations promulgated thereunder.
  7. The Permittee shall maintain all equipment covered under this permit in such a manner that the performance of such equipment shall not cause a violation of the Environmental Protection Act or regulations promulgated thereunder.
  8. The Permittee shall maintain a maintenance record on the premises for each item of air pollution control equipment. This records shall be made available to any agent of the Environmental Protection Agency at any time during normal working hours and/or operating hours. As a minimum, this record shall show the dates of performance and nature of preventative maintenance activities.
  9. No person shall cause or allow continued operation during malfunction, breakdown or startup of any emission source or related air pollution control equipment if such operation would cause a violation of an applicable emission standard or permit limitation. Should a malfunction, breakdown or startup occur which results in emissions in excess of any applicable standard or permit limitation, the Permittee shall:
    - a. Immediately report the incident to the Illinois EPA's Regional Field Operations Section Office by telephone, telegraph, or other method as constitutes the fastest available alternative, and shall comply with all reasonable directives of the Illinois EPA with respect to the incident;
    - b. Maintain the following records for a period of no less than two (2) years:
      - i. Date and duration of malfunction, breakdown, or startup,
      - ii. Full and detailed explanation of the cause,
      - iii. Contaminants emitted and an estimate of quantity of emissions,
      - iv. Measures taken to minimize the amount of emissions during the malfunction, breakdown or startup, and
      - v. Measures taken to reduce future occurrences and frequency of incidents.
  10. If the permit application contains a compliance program and project completion schedule, the Permittee shall submit a project completion status report within thirty (30) days of any date specified in the compliance program and project completion schedule or at six month intervals, whichever is more frequent.
  11. The Permittee shall submit an Annual Emission Report as required by 35 Ill. Adm. Code 201.302 and 35 Ill. Adm. Code Part 254.