

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD  
OF THE STATE OF ILLINOIS

WRB REFINING, LLC	)	
Alky HM2 NOx Reduction	)	
	)	
	)	PCB 11-
	)	(Tax Certification - Air)
PROPERTY IDENTIFICATION NUMBER	)	
19-1-08-35-00-000-001 or portion thereof	)	

NOTICE

TO: *[Electronic filing]*  
 John Therriault, Assistant Clerk  
 Illinois Pollution Control Board  
 State of Illinois Center  
 100 W. Randolph Street, Suite 11-500  
 Chicago, Illinois 60601

*[Service by mail]*  
 Michael Kemp  
 WRB Refining, LLC  
 404 Phillips Building  
 Bartlesville, Oklahoma 74004

*[Service by mail]*  
 Steve Santarelli  
 Illinois Department of Revenue  
 101 West Jefferson  
 P.O. Box 19033  
 Springfield, Illinois 62794

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

Respectfully submitted by,

*/s/ Robb H. Layman*  
 Robb H. Layman  
 Assistant Counsel

Date: July 6, 2011

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
 1021 North Grand Avenue East  
 P.O. Box 19276  
 Springfield, IL 62794-9276  
 Telephone: (217) 524-9137

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OF THE STATE OF ILLINOIS

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19-1-08-35-00-000-001 or portion thereof	)	

APPEARANCE

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

Respectfully submitted by,

/s/ Robb H. Layman

Robb H. Layman  
Assistant Counsel

Date: July 6, 2011

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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. The Illinois EPA recommends **issuance** of a tax certification covering the subject matter of the request. In support thereof, the Illinois EPA states as follows:

1. On or about October 14, 2010, the Illinois EPA received an application and supporting information from WRB REFINING, LLC, (“WRB Refining”) concerning the proposed tax certification of certain air emission sources and/or equipment located at its Wood River petroleum refinery in Madison County, Illinois. A copy of the application is attached hereto. **[Exhibit A]**.

2. The applicant’s principal business address is as follows:

WRB Refining LLC  
404 Phillips Building  
Bartlesville, Oklahoma 74004

3. The facility address is as follows:

WRB Refining LLC  
900 South Central Avenue  
P.O. Box 76  
Roxana, Illinois 62084

4. The subject matter of this request consists of an Alky Heat Medium Furnace (“HM-2”) Nitrogen Oxides (“NOx”) Reduction Project, which was undertaken by the refinery to reduce NOx emissions. As described in the application, NOx emissions are produced from the furnaces used to heat the circulating stream of Heat Medium Oil that aids the Alkylation fractionation columns in the distillation of product streams from the Alkylation Unit. The Alky HM-2 NOx Reduction Project resulted in the installation of ultralow NOx burners, which reduce the formation of NOx emissions by combusting fuel gas at a lower flame temperature. The construction project also included the installation of additional filtering and conditioning of fuel gas to ensure that the solid materials do not interfere with the burner ports. The application states that the project will reduce NOx emissions by an estimated sixty-three (63) tons per year.

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 Alky HM-2 NOx Reduction Project to prevent, eliminate or reduce air pollution, it is the Illinois EPA’s engineering judgment that the various systems, constructions, devices and/or buildings or equipment from the project relating to air pollution control 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. **[Exhibit B]**.

7. Because the substantive components of the application for the Alky HM-2 NOx Reduction Project satisfies the aforementioned criteria, the Illinois EPA recommends that the Board **issue** the applicant's requested tax certification.

Respectfully submitted by,

/s/ Robb H. Layman

Robb H. Layman  
Assistant Counsel

DATED: July 6, 2011

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, Illinois 62794-9276  
Telephone: (217) 524-9137

CERTIFICATE OF SERVICE

I hereby certify that on the 6<sup>th</sup> day of July, 2011, I electronically filed the following instruments entitled **NOTICE, APPEARANCE** and **RECOMMENDATION** with:

John Therriault, Assistant Clerk  
Illinois Pollution Control Board  
100 West Randolph Street  
Suite 11-500  
Chicago, Illinois 60601

and, further, that I did send a true and correct paper 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  
WRB Refining, LLC  
404 Phillips Building  
Bartlesville, Oklahoma 74004

/s/ Robb H. Layman  
Robb H. Layman  
Assistant Counsel


**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 WRB Refining LLC		
	Person Authorized to Receive Certification Michael Kemp		Person to Contact for Additional Details Gordon Terhune
	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) 255-2876
	Location of Facility Quarter Section      Township      Range		Municipality      Township
	Street Address 900 S. Central Ave.		County      Book Number Madison
	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.		Date Issued	
NPDES PERMIT No. IL0000205		Date Issued 04/14/09	Expiration Date 04/14/09
Air Pollution Control Construction Permit No. 6050052		Date Issued 08/05/08	
Air Pollution Control Operating Permit No. 95120306		Date Issued 11/07/03	
Sec. C    MANUFACTURING PROCESS	Describe Unit Process This Alkylation process unit converts short-chain molecules into larger molecules to produce a high octane gasoline stream. It is part of a petroleum refinery. See Alky Heat Medium Furnace (HM-2) NOx Reduction Project attachment.		
	Materials Used in Process Propane, propylene, butane, butylenes, isobutane, gasoline, sulfuric acid catalyst Heat Medium Oil Refinery Fuel Gas and air		
Sec. D  POLLUTION CONTROL FACILITY DESCRIPTION	Describe Pollution Abatement Control Facility See Alky Heat Medium Furnace (HM-2) NOx Reduction Project attachment.		

Sec. F POLLUTION CONTROL FACILITY - CONTAMINANTS	(1) Nature of Contaminants or Pollutants			
		Material Retained, Captured or Recovered		
	Contaminant or Pollutant	DESCRIPTION	DISPOSAL OR USE	
	Nitrogen oxides (NOx)	N2	N2 not converted to NOx	
Sec. F ACCOUNTING DATA	(2) Point(s) of Waste Water Discharge Refinery process sewer			
		Plans and Specifications Attached	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
	(3)	Are contaminants (or residues) collected by the control facility?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
	(4)	Date installation completed <u>08/03/06</u> status of installation on date of application <u>100%</u>		
	(5)	a. TOTAL INSTALLED COST	\$ 5,072,083.00	
		b. NET SALVAGE VALUE IF CONSIDERED REAL PROPERTY:	\$ 30,432.00	
		c. PRODUCTIVE GROSS ANNUAL INCOME OF CONTROL FACILITY:	\$ 0.00	
	d. PRODUCTIVE NET ANNUAL INCOME OF CONTROL FACILITY:	\$ 0.00		
	e. PERCENTAGE CONTROL FACILITY BEARS TO WHOLE FACILITY VALUE:	% To Be Determined		
Sec. F SIGNATURE	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>DIRECTOR - PTRAC</u>		
	Signature	Title		
Sec. G INSTRUCTIONS	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 62794-9276	Al Keller Permit Section Division of Water Pollution Control	Donald E. Sutton Permit Section Division of Air Pollution Control



**APPLICATION FOR CERTIFICATION (PROPERTY TAX TREATMENT)  
POLLUTION CONTROL FACILITY  
WRB – Wood River Refinery**

Project: Alky Heat Medium Furnace (HM-2) NOx Reduction Project

Section C – Manufacturing Process

Process Description:

At the Wood River Refinery, the Alkylation Unit produces a low sulfur high octane gasoline stream by reacting propylene and butylenes with isobutane in the presence of a sulfuric acid catalyst. The product from the Alkylation reactors contains propane, normal butane, isobutane, and the high octane gasoline range material produced in the reactors. The reactor product must be fractionated to remove the propane, butane, and isobutane from the high octane gasoline.

The Alkylation fractionation columns require elevated temperatures to complete the distillation steps. A circulating stream of heavy oil called Heat Medium Oil supplies the energy required by the Alkylation fractionation columns. First, cooled Heat Medium Oil is routed to the tubes of the Heat Medium Furnace, HM-2. In HM-2, refinery fuel gas is combusted to raise the temperature of the Heat Medium Oil. The hot Heat Medium Oil is then routed to heat exchangers and reboilers associated with the Alkylation fractionation columns. The hot Heat Medium Oil provides the energy necessary to complete the distillation steps and is cooled in the process. The cooled Heat Medium Oil is then returned to HM-2 for reheating.

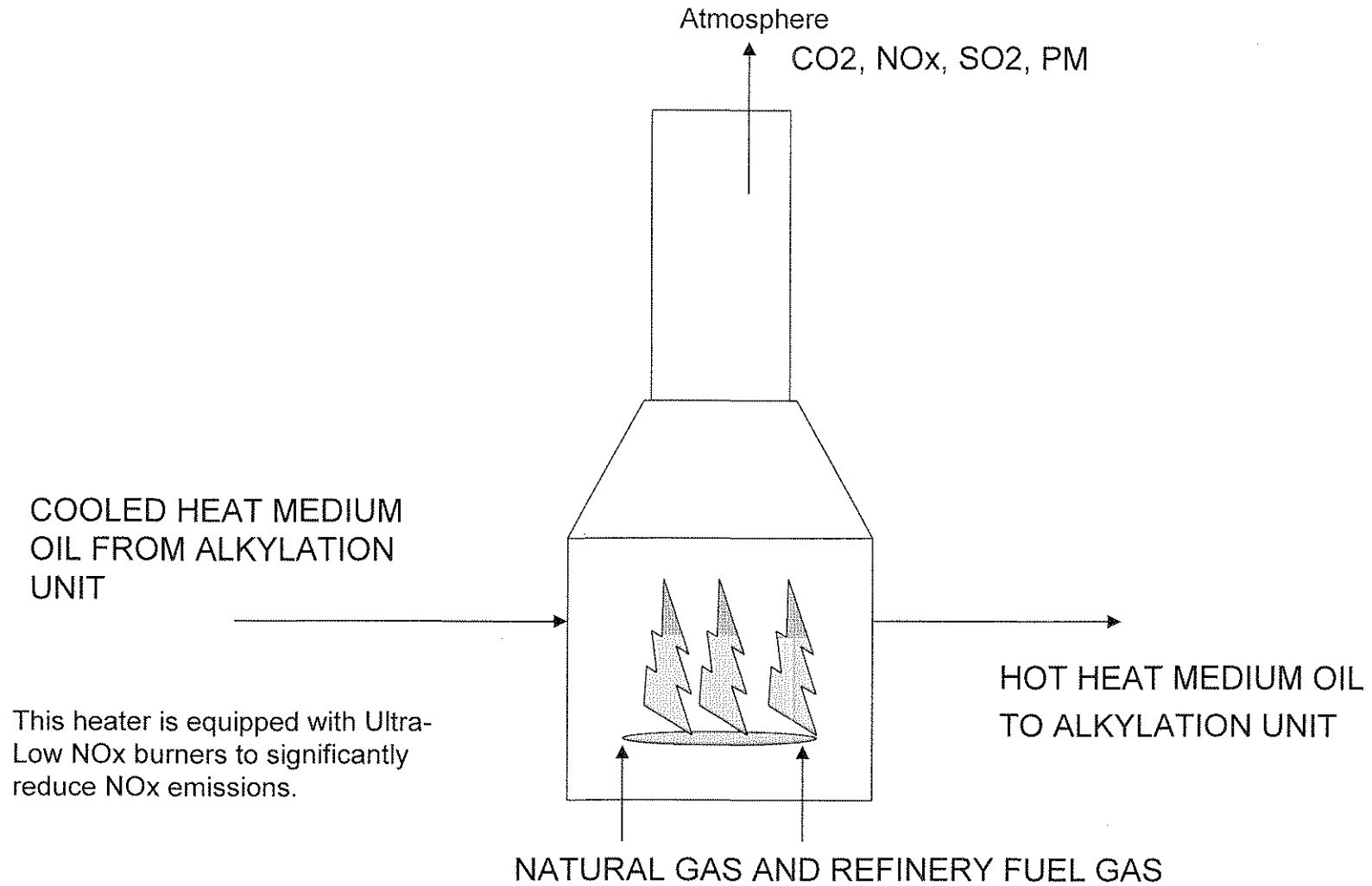
Section D – Pollution Control Facility Description

The Alkylation fractionation columns require elevated temperatures to complete the distillation steps. These elevated temperatures are provided by a circulating stream of heavy oil called Heat Medium Oil which is reheated via fuel fired furnaces. Fuel fired furnaces produce nitrogen oxides (NOx) which is a pollutant released to the atmosphere in the furnace flue gas. NOx is formed when nitrogen and oxygen in the combustion air combine with one another at the high temperatures in a flame.

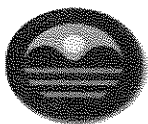
Burner manufacturers have developed Ultralow NOx burners which achieve lower NOx formation by burning the fuel gas with a lower flame temperature. The lower flame temperature is achieved by staging the fuel into the burner and by inducing a flow of flue gas back into the burner. The flow passages for fuel gas in the Ultralow NOx burners are smaller than those in conventional burners. Ultralow NOx burners are more expensive than conventional burners. Also, additional filtering and conditioning of the fuel gas is required when using Ultralow NOx burners that would not be required with conventional burners. Because the heat release pattern of ULN burners differs from conventional burners, the convection sections of existing heaters may require modification if Ultralow NOx burners are installed.

The Alky Heat Medium Furnace (HM-2) NOx Reduction Project was installed solely to reduce NOx emissions to the atmosphere. This project installed Ultralow NOx burners in HM-2 and also installed additional filtering and conditioning of the fuel gas to prevent solids from plugging the ports in the Ultralow NOx burners. This Pollution Control Facility reduces NOx emissions by approximately 63 tons per year.

The Alky Heat Medium Furnace (HM-2) NOx Reduction Project was installed solely to reduce NOx emissions to the atmosphere. The Wood River Refinery receives no financial benefit from this project.



**ALKYLATION UNIT HEATER HM-2 PROCESS FLOW DIAGRAM**



1021 NORTH GRAND AVENUE EAST, P.O. BOX 19506, SPRINGFIELD, ILLINOIS 62794-9506 -(217) 782-2113

PAT QUINN, GOVERNOR

LISA BONNETT, INTERIM DIRECTOR

MEMORANDUM

Technical Recommendation for Tax Certification Approval

Date: May 20, 2011  
To: Robb Layman  
From: Edwin C. Bakowski <sup>7</sup>  
Subject: WRB Refining, LLC. TC-10-10-14AD

This Agency received a request on October 14, 2010 from WRB Refining, LLC. for an Illinois EPA recommendation regarding tax certification of air pollution control facilities pursuant to 35 Ill. Adm. Code 125.204. I offer the following recommendation.

The air pollution control facilities in this request include the following:

Alky HM2 NO<sub>x</sub> Reduction Project with ultralow NO<sub>x</sub> burners which burns the fuel gas at a lower temperature by staging the fuel into the burner and by inducing a flow of flue gas back to the burner which reduces NO<sub>x</sub> emissions. Because the primary purpose of this system is to reduce or eliminate air pollution, it is certified as a pollution control facility.

This facility is located at 900 South Central Avenue, Roxana, Illinois  
The property identification number is 19-1-08-35-00-000-001

Based on the information included in this submittal, it is my engineering judgement that the proposed facility may be considered "Pollution Control Facilities" under 35 IAC 125.200(a), with the primary purpose of eliminating, preventing, or reducing air pollution, or as otherwise provided in this section, and therefore eligible for tax certification from the Illinois Pollution Control Board. Therefore, it is my recommendation that the Board issue the requested tax Certification for this facility.

FEM:psj

Exhibit B