

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD  
OF THE STATE OF ILLINOIS

WRB REFINING, LLC	)	
Catalytic Cracking Units Nos. 1 and 2 SO2 and	)	
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

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

OF THE STATE OF ILLINOIS

WRB REFINING, LLC )  
Catalytic Cracking Units Nos. 1 and 2 SO2 and )  
NOx Reduction )  
 ) PCB 11-  
 ) (Tax Certification - Air)  
PROPERTY IDENTIFICATION NUMBER )  
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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	)	(Tax Certification - Air)
PROPERTY IDENTIFICATION NUMBER	)	
19-1-08-35-00-000-001 or portion thereof	)	

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 the Catalytic Cracking Units (“CCUs”) Nos. 1 and 2 Reduction project, which was undertaken by the refinery to reduce sulfur dioxide (“SO<sub>2</sub>”) and nitrous oxide (“NO<sub>x</sub>”) emissions from the designated CCUs. The two CCUs process gas oil at the refinery into lighter-grade products through a chemical process commonly known as fluid catalytic cracking. As described in the application, new pollution control equipment was placed into service for each CCU that will control and reduce emissions from the CCUs’ heater stack gases. A selective catalytic reduction unit was installed to CCU No. 1 in 2008, which will result in a reduction of NO<sub>x</sub> emissions of an estimated six hundred (600) tons per year. A wet gas scrubber was added to the CCU No. 1 as part of the project, resulting in the control of SO<sub>2</sub> emissions of an estimated eleven thousand (11,000) tons per year and an undetermined amount of particulate matter emissions. A separate selective catalytic reduction unit was added to CCU No. 2 during 2009 and 2010, which will result in a reduction of NO<sub>x</sub> emissions of an estimated eight hundred fifty (850) tons per year. A wet gas scrubber was also added to CCU No. 2 and will reduce SO<sub>2</sub> emissions by more than thirteen thousand five hundred (13,500) tons per year and an undetermined amount of particulate matter emissions.

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 CCUs Nos. 1 and 2 SO<sub>2</sub> and NO<sub>x</sub> 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]**.

8. Because the substantive components of the application for the CCUs Nos. 1 and 2 SO<sub>2</sub> and NO<sub>x</sub> 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

\*\*\*\*\* PCB 12-010 \*\*\*\*\*  
 APPLICATION FOR CERTIFICATION (PROPERTY TAX TREATMENT)  
 POLLUTION CONTROL FACILITY  
 AIR  WATER

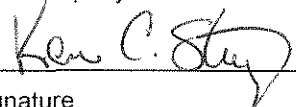
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
 P. O. Box 19276, Springfield, IL 62794-9276

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.

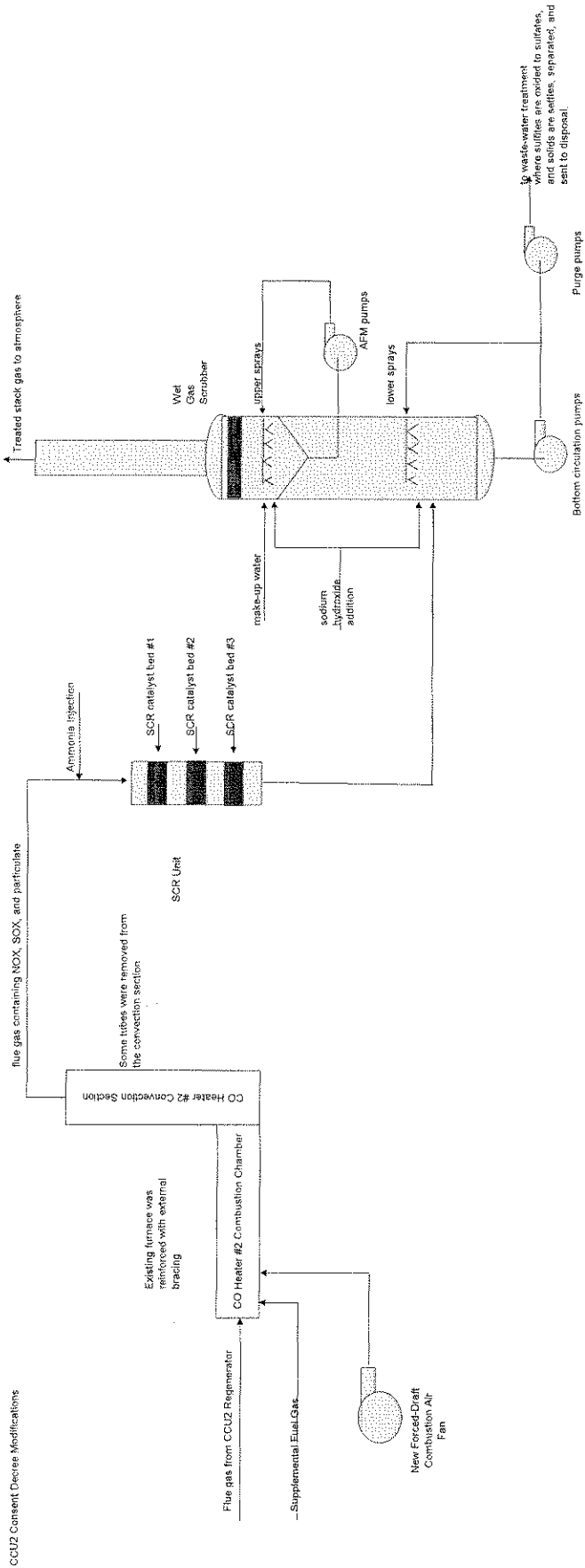
FOR AGENCY USE

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 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.		Date Issued		
NPDES PERMIT No. IL0000205		Date Issued 04/14/04	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 The Catalytic Cracking Units #1 and #2 upgrade gas oil into lighter, more useful products in a chemical process known as fluid catalytic cracking. The Selective Catalytic Reduction units and the Wet Gas Scrubbers remove NOx, SOx, and particulates from the CCU heater stack gases.			
	Materials Used in Process Flue gas, aqueous ammonia, sodium hydroxide caustic solution, and reverse-osmosis water.			
Sec. D  POLLUTION CONTROL FACILITY DESCRIPTION	Describe Pollution Abatement Control Facility See Catalytic Cracking Unit #1 and Catalytic Cracking Unit #2 SOx and NOx Reduction Project attachment.			

*Exhibit A*

Sec. E	(1) Nature of Contaminants or Pollutants		
POLLUTION CONTROL FACILITY - CONTAMINANTS		Material Retained, Captured or Recovered	
	Contaminant or Pollutant	DESCRIPTION	DISPOSAL OR USE
	Sulfur Oxides	Sulfites	Converted to sulfates.
	Nitrogen Oxides	Nitrogen Gas	Released to atmosphere
	FCC Catalyst Particulates	Dried Solids	Solid Waste disposal
	(2) Point(s) of Waste Water Discharge		
	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 checked="" type="checkbox"/>	No <input type="checkbox"/>
(4)	Date installation completed <u>12/01/10</u> status of installation on date of application <u>100%</u>		
ACCOUNTING DATA	(5) a.	TOTAL INSTALLED COST	\$ 218,860,151.00
	b.	NET SALVAGE VALUE IF CONSIDERED REAL PROPERTY:	\$ 2,189,000.00
	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	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.		
SIGNATURE	 Signature		
	Title <u>DIRECTOR - PTRAC</u>		
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.		
INSTRUCTIONS	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: Catalytic Cracking Unit #1 and Catalytic Cracking Unit #2 SOx and NOx Reduction Project

Section D – Pollution Control Facility Description

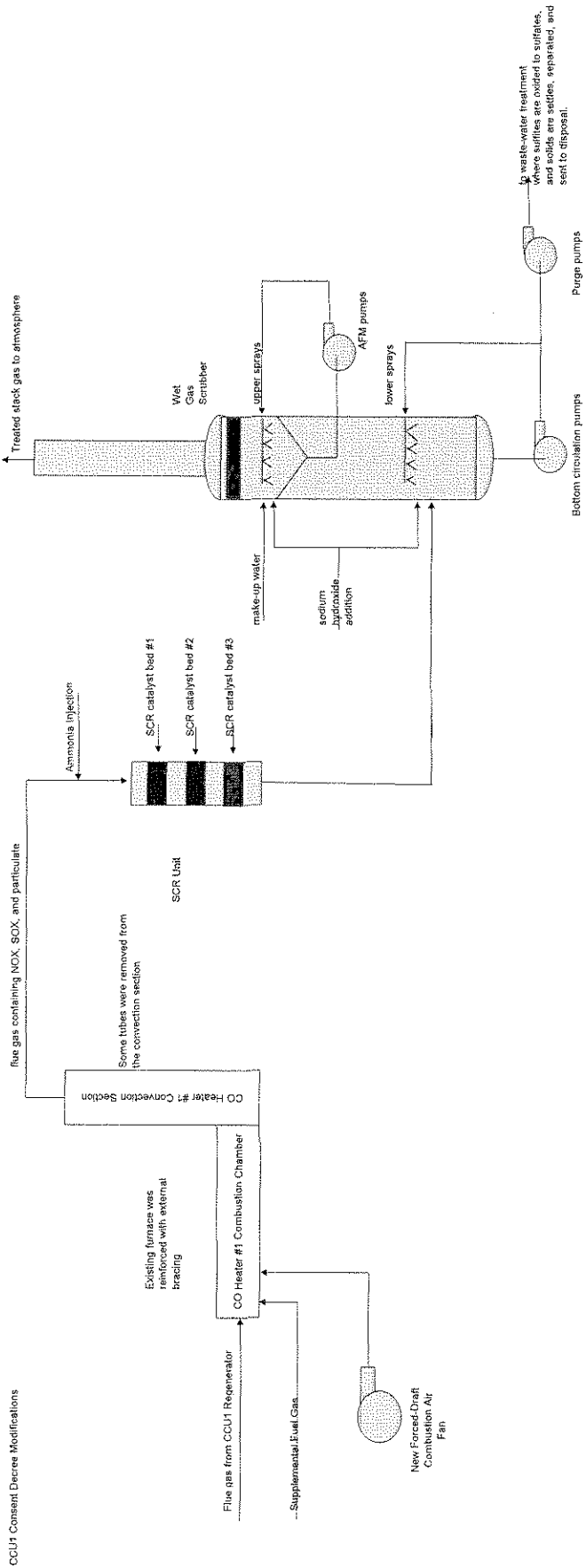
During 2008, equipment was installed and commissioned at Catalytic Cracking Unit #1 (CCU-1) to substantially reduce NOx (nitrous oxide and nitric oxide) and SOx (sulfur dioxide and sulfur trioxide) pollution emitted from the CCU-1 Heater stack flue gas. This pollution control facility directly reduces CCU-1 NOx pollution by over 600 tons per year and directly reduces CCU-1 SOx pollution by over 11,000 tons per year. The new CCU-1 equipment includes a Selective Catalytic Reduction (SCR) unit to reduce NOx emissions and a Wet Gas Scrubber (WGS) to reduce SOx emissions.

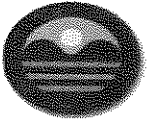
During 2009 and 2010, equipment was installed and commissioned at Catalytic Cracking Unit #2 (CCU-2) to substantially reduce NOx and SOx pollution emitted from the CCU-2 Heater stack flue gas. This pollution control facility directly reduces CCU-2 NOx pollution by over 850 tons per year and directly reduces CCU-2 SOx pollution by over 13,500 tons per year. The new CCU-2 equipment includes a Selective Catalytic Reduction (SCR) unit to reduce NOx emissions and a Wet Gas Scrubber (WGS) to reduce SOx emissions.

Process sketches for the CCU-1 SCR and WGS and the CCU-2 SCR and WGS are attached. The SCR unit removes NOx from the CCU Heater flue gas through a reaction with ammonia in the presence of a catalyst composed of vanadium pentoxide. This fixed bed of catalyst resides in the flue gas duct leaving the CCU Heater. Aqueous ammonia is injected upstream of the catalyst. The ammonia reacts directly with the NOx, producing nitrogen gas (N<sub>2</sub>) and water vapor. The process eliminates over 94% of the NOx generated at the CCU Heater, significantly reducing NOx emissions to the atmosphere. An ammonia storage tank, ammonia transfer pumps, and ammonia vaporization facilities are included in the design of this facility.

The Wet Gas Scrubber (WGS) is located downstream of the SCR unit. The purpose of the WGS is to remove SOx (sulfur dioxide and sulfur trioxide) from the CCU Heater flue gas. In addition, the WGS removes catalytic cracking catalyst particulates (ie catalyst dust) from the CO Heater flue gas. The WGS removes SOx and particulates by contacting the flue gas with water sprays. The water sprays extract the SOx from the flue gas and form an aqueous solution of sulfurous and sulfuric acids. To protect the equipment from these acids, sodium hydroxide solution is added to the circulating water. Analyzers control the addition of sodium hydroxide to maintain a neutral pH. The water sprays also cause the fine particulates to coalesce and transfer from the flue gas to the circulating water. High-purity reverse-osmosis water is used in this process. A continuous purge of the circulating water is necessary to prevent the concentration of salt (sodium sulfite, sodium sulfate, sodium bisulfite, and sodium bisulfate) and solids from getting too high. This purge water stream is delivered to the Wood River Refinery Waste Water Treatment Plant. In the Waste Water Treatment Plant, the catalyst particulates are recovered and eventually sent to a solid waste landfill. The WGS removes over 98% of the SOx and over 96% of the particulates from the CCU Heater flue gas, significantly reducing SOx and particulate emissions to the atmosphere.

The material recovered by this pollution control facility generates no revenue for the Wood River Refinery, and this pollution control facility results in no net income for the Wood River Refinery. In summary, the CCU-1 and CCU-2 Selective Catalytic Reduction (SCR) units and Wet Gas Scrubbers (WGS) were installed solely to reduce NOx, SOx, and particulate emissions to the atmosphere.





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 *EB*  
Subject: WRB Refining, LLC. TC-10-10-14R

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:

CCU-1 and CCU-2 SO<sub>x</sub> and NO<sub>x</sub> Reduction Project including the selective catalytic reduction units and wet gas scrubbers which removes SO<sub>x</sub>, NO<sub>x</sub>, PM emissions from the CCU heater stack gases. 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*