## BEFORE THE ILLINOIS POLLUTION CONTROL BOARD OF THE STATE OF ILLINOIS

WRB REFINING, LLC Gasoline SZorb Unit	)	
	)	PCB 12-
	)	(Tax Certification - Air)
PROPERTY IDENTIFICATION NUMBER	)	
19-1-08-35-00-000-001 or portion thereof	ý	

## NOTICE

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

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

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

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,

ls/ Robb H. Layman

Robb H. Layman Assistant Counsel

Date: August 25, 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

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WRB REFINING, LLC Gasoline SZorb Unit

PROPERTY IDENTIFICATION NUMBER 19-1-08-35-00-000-001 or portion thereof

PCB 12-(Tax Certification - Air)

### **APPEARANCE**

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

Protection Agency.

Respectfully submitted by,

1st Robb H. Layman

Robb H. Layman Assistant Counsel

Date: August 25, 2011

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

## BEFORE THE ILLINOIS POLLUTION CONTROL BOARD OF THE STATE OF ILLINOIS

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WRB REFINING, LLC Gasoline SZorb Unit

PROPERTY IDENTIFICATION NUMBER 19-1-08-35-00-000-001 or portion thereof

PCB 12-(Tax Certification - Air)

## 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 Gasoline SZorb Unit, which was implemented by the refinery to reduce emissions of sulfur dioxide ("SO2") from the light and intermediate gasoline produced by the Fluid Catalytic Cracker ("FCC"). the fuel-fired furnaces that heat the distillation processes undertaken in the Distilling Unit No. 4/Vacuum Flasher No. 4 of the Distilling West Area at the refinery. The project consists of the installation of ultralow NOx burners in one of the furnaces, designated H-28, to reduce NOx emissions from the atmosphere. As stated in the application, the project also included modifications to the furnace's radiant and convection sections to accommodate the use of ultralow NOx burners, the installation of added filtering and conditioning of the fuel gas to protect against solids from building up (or plugging) the burner ports and the installation of a continuous emissions monitoring system. The impetus of the project stemmed from a federal consent order requiring reductions in NOx emissions from refinery operations.

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."

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 Distilling West H-28 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 III. Adm. Code 125.200. [Exhibit B].

8. Because the substantive components of the application for the Distilling West H-

28 NOx Reduction project satisfies the aforementioned criteria, the Illinois EPA recommends

that the Board issue the applicant's requested tax certification.

Respectfully submitted by,

1st Robb H. Layman

Robb H. Layman Assistant Counsel

DATED: August 25, 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 25<sup>th</sup> day of August, 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

1st Robb H. Layman

Robb H. Layman Assistant Counsel

# Electronic Filing - Received, Clerk's Office, 08/25/2011

APPLICATION FOR CERTIFIER 2014 (2002 PTY TAX TREATMENT) POLLUTION CONTROL FACILITY AIR I WATER I

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

This Agency is authorized to request this information under Illinois Revised Statues, 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.

File No.						
Sec A	Date Received	Certification No.		Date		
	Company Name	oortineation file.				
	WRB Refining LLC					
F	Person Authorized to Receive Certification		Person to Contact for Additional Details			
	Michael Kemp		Gordon Terhune			
	Street Address		Street Address			
	404 Phillips Building		900 S. Central Ave., P.O. Box 76			
⊢ [	Municipality, State & Zip Code		Municipality, State & Zip Code			
NAC	Bartlesville, OK 74004		Roxana, IL 62084			
APPLICANT	Telephone Number		Telephone Number			
AP	(918) 661-9055		(618) 255-2876			
Γ	Location of Facility		Municipality	Township		
	Quarter Section Township	Range				
ŀ	Street Address		County	Book Number		
	900 S. Central Ave.		Madison			
-	Property Identification Number		Parcel Number			
			19-1-08-35-00-000-001			
Sec. B	Nature of Operations Conducted at the Above	e Location				
	Petroleum Refining					
Ů Z (j						
URI ONS	Water Pollution Control Construction Permit I	No.	Date Issued			
ATI A						
MANUFACTURING OPERATIONS	NPDES PERMIT No.		Date Issued	Expiration Date		
00 O	IL0000205		04/14/04	04/14/09		
<	Air Pollution Control Construction Permit No.		Date issued			
	05050062		01/09/06			
Г	Air Pollution Control Operating Permit No.		Date Issued			
	95120306		11/07/03			
Sec. C	Describe Unit Process		<u> </u>			
	The Szorb process uses catalyst and byd	rogen to remov	e sulfur from dasoline f	to meet Federally mandated		
	The Szorb process uses catalyst and hydrogen to remove sulfur from gasoline to meet Federally mandated EPA Tier II gasoline sulfur requirements. See attached EPA Tier II Gasoline SZorb Project attachment.					
S I	El A her il gasolitie sulti requiements.	See allached				
MANUFACTURING PROCESS				r		
AC.	Materials Used in Process					
PR	Gasoline, hydrogen, sorbent, air, caustic. See attached write up					
WA!						
Sec. D	Describe Pollution Abatement Control Facility	·	·			
Sec. D						
	See EPA Tier II Gasoline SZorb Project a	ittachment.				
S S						
NTROL						
SCRIPTION						
DESCRIPTION						
LUTION CONTROL						
POLLUTION CONTROL FACILITY DESCRIPTION						

Tax Certification for Pollution Contre Page 1 of 2 8/00

Exhibit A

Sec. E	(1) Nature of Contaminants or Pollutants							
			Material Reta	ined, Capt	ured or Recove	red		
S		hinant or Pollutant	DESCRIPTION	DISPOSAL OR USE				
ź	Sulfur o	xides (SOx)	Sodium Sulfates	Treated in	Waste Water	Freatment		
NTA								
- <sup>7</sup>								
CILL								
POULUTION CONTROL FACILITY - ACCOUNTING DATA	(2) Point(s) of Waste Water Discharge							
JTRC			Plans and Specifications	Attached	Yes 🗌	No 🗵		
CO	(3) A	re contaminants (or residues) col	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·				
NOL		Date installation completed 02/15/		status of installation on date of a				
TLUT	(5) a	TOTAL INSTALLED COST			\$ 99,054,000			
5 DA	b		IDERED REAL PROPERTY:	\$ 594,324.00				
TING	c		INCOME OF CONTROL FACILITY:		\$ 0.00			
4No;	d				\$ 0.00			
ACO	e		LITY BEARS TO WHOLE FACILITY					
Sec. F	1.1.1	wing information is submitted in acco			<sup>%</sup> To Be Dete	rminea		
	knowled	ge, is true and correct. The facilities						
บหย	Illinois F	Property Tax Code.						
SIGNATURE			DIRECTOR-PTRRC					
SIG								
Sec. G	Signature / Title							
	0				water and air) 140	and both air and		
	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 pollution control facility. Include a listing of each major piece of equipment included in the claimed						
		fair cash value for real property. Include an average analysis of the influent and effluent of the control facility stating the						
(0	Sec. E	collection efficiency.       Sec. E     List air contaminants, or water pollution substances released as effluents to the manufacturing processes. List also the final						
INSTRUCTIONS		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.						
ncı		Item (2) - Refers to water pollution but	can apply to water-carried wastes from a	ir pollution co	ntrol facilities. Subi			
4STF		which clearly show (a) Point(s) of disch facility.	arge to receiving stream, and (b) Sewers	and process	piping to and from	the control		
~		Item (3) - If the collected contaminants	are disposed of other than as wastes, st					
			f the collected substances. State the cost ution control facility was first placed in se					
		Item (5) – This information is essential activate project review prior to certifica	al to the certification and assessment actions. This accounting data must be completed to					
	Sec. F							
		Submit to:	Attention:	Attention:				
		Illinois EPA	Al Keller	Donald E. S	utton			
		P.O. Box 19276	Permit Section	Permit Secti	on			
<u> </u>		Springfield, IL 62794-9276	Division of Water Pollution Control	Division of A	ir Pollution Control			

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

Project: EPA Tier II Gasoline SZorb Project

#### Section C - Manufacturing Process

Process Description:

1 - , · The Wood River Refinery implemented the EPA Tier II Gasoline SZorb Project to reduce the emission of sulfur oxides (SOx) pollution from the use of gasoline.

The Fluid Catalytic Cracker Unit (FCC or CCU) is a process that uses heat and a catalyst to break large hydrocarbon molecules into smaller, more useful molecules. The solid FCC catalyst is similar in texture and size to sugar. This catalyst can be fluidized by passing air, steam, or hydrocarbon vapors through the catalyst. In the FCC process, the feed stream which contains large hydrocarbon molecules is heated and mixed with hot regenerated catalyst at the bottom of a reactor riser. The hot catalyst vaporizes the feed producing a fluidized catalyst/oil mixture which flows up the reactor riser. The large oil molecules break into a wide range of smaller molecules in the reactor riser. At the top of the riser, the hydrocarbon vapors are separated from the catalyst by cyclones in the reactor. The hydrocarbons flow to a distillation column where they are condensed and separated by boiling range. A full range of products are produced including fuel gas, LPG, gasoline, diesel, and heavy oil. Coke is laid down on the catalyst as a byproduct of the cracking reaction in the reactor. The coked (spent) catalyst separated in the reactor cyclones drops into a stripping section where steam is used to remove any light hydrocarbons that remain on the catalyst before sending the catalyst to the regenerator. In the regenerator air is blown through the catalyst to burn the coke off the catalyst making it suitable to send back to the reactor.

Due to the presence of sulfur in the FCC feed stream, the FCC products also contain sulfur. An earlier project installed equipment to fractionate the FCC gasoline into light, intermediate, and heavy portions and to hydrotreat the heavy portion to remove sulfur and thereby reduce SOx pollution. The EPA Tier II Gasoline SZorb Project installed a new refinery unit, the SZorb Unit, to remove sulfur from the light and intermediate portions of the FCC gasoline. This sulfur removal reduces SOx pollution from the use of gasoline.

The SZorb unit uses hydrogen and a sorbent that selectively removes sulfur containing molecules from the combined light and intermediate FCC gasoline stream. The gasoline stream is mixed with hydrogen, heated, and sent to the Reactor section. In the Reactor the gasoline contacts regenerated Sorbent where the sulfur compounds cling to the Sorbent. The resulting low sulfur gasoline stream is sent to a recovery/stabilization section where light material is recovered and sent to the Sats Gas Plant for further processing. The stabilized low sulfur gasoline is sent to gasoline blending. This process removes approximately 4 tons per day of sulfur from the Wood River gasoline pool which results in reduced SOx pollution of approximately 2920 tons per year.

Spent Sorbent is sent to the regeneration section where air is used to burn the sulfur containing compounds and regenerate the sorbent. The flue gas from the regenerator is scrubbed with caustic to remove SOx. Spent caustic is mixed with spent caustic from other units and processed in the waste water treatment plant.

Materials Used in Process:

High sulfur gasoline Hydrogen Sorbent Air Caustic

### Section D - Pollution Control Facility Description

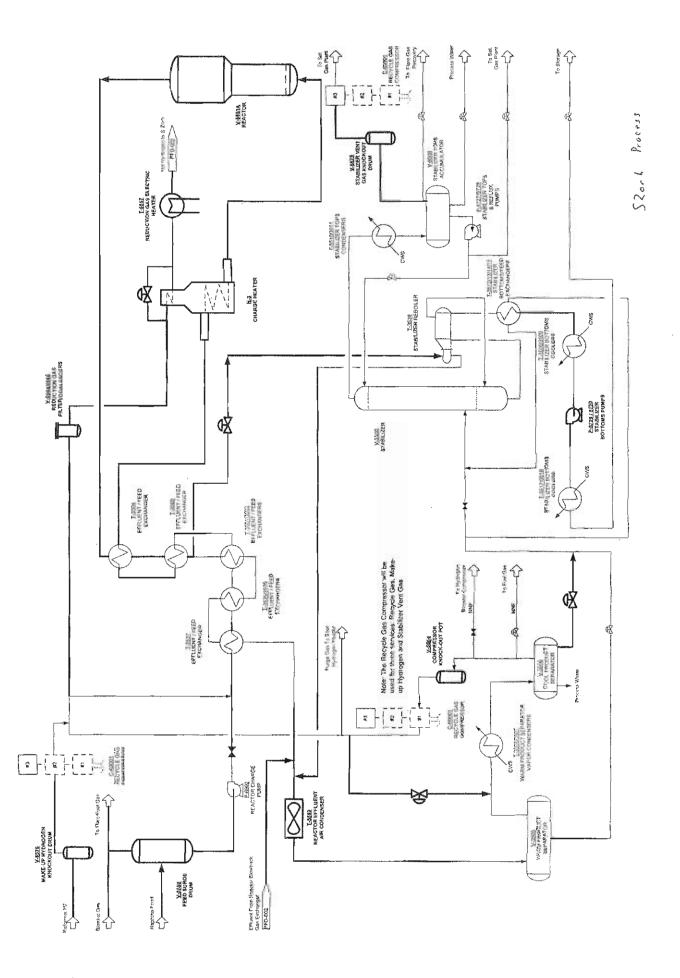
The Wood River Refinery implemented the EPA Tier II Gasoline SZorb Project solely to reduce air pollution due to SOx, NOx, and particulates. The newly installed SZorb unit is a Pollution Control Facility which removes sulfur from the light and intermediate portions of the FCC gasoline. By removing sulfur from these gasoline streams, this Pollution Control Facility reduces the emission of sulfur oxides (SOx) pollution from the use of gasoline. Prior to this project, these gasoline streams were routed to gasoline blending with no reduction in sulfur content. The SZorb unit directly reduces SOx pollution by approximately 2920 tons per year.

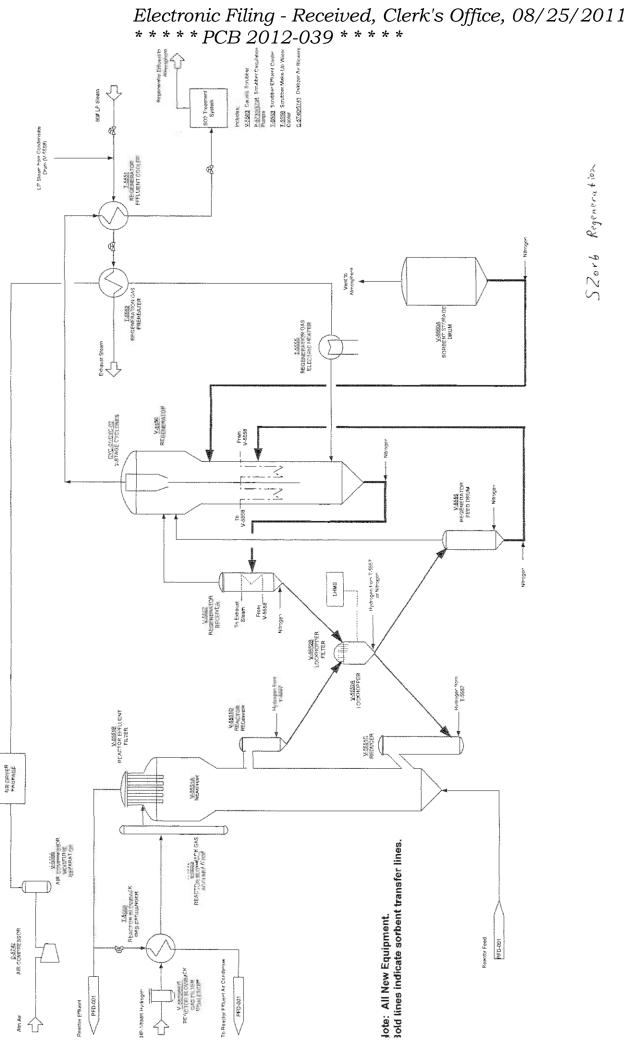
Also, the production of low sulfur gasoline allows gasoline engines to be fitted with advanced emission control systems that would otherwise be poisoned by sulfur. These advanced emission control systems can greatly reduce emissions of oxides of nitrogen and particulate matter. Thus, low sulfur gasoline is a necessary and integral part of the automotive pollution reduction system.

Thus, this project provides pollution control in two ways. First, the project directly reduces SOx pollution by removing sulfur from the gasoline product. Second, the project provides the gasoline quality necessary for reducing emissions of oxides of nitrogen and particulate matter through the use of advanced emission control systems in gasoline engines.

This pollution control facility results in no net income for the Wood River Refinery

In summary, the Wood River Refinery EPA Tier II Gasoline SZorb Project was implemented solely to reduce SOx, NOx, and particulate pollution.





SZorb Regeneration





1021 NORTH GRAND AVENUE EAST, P.O. BOX 19506, Springfield, Illinois 62794-9506 - (217) 782-2113 Pat Quinn, Governor

#### MEMORANDUM

Technical Recommendation for Tax Certification Approval

Date: May 13, 2011

To: Robb Layman

From: Edwin C. Bakowski

Subject: WRB Refining, LLC. TO-10-14T

This Agency received a request on fotober 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:

EPA Tier II Gasoline Szorb Project which reduces Sox emissions by sending spent Sorbent to the regeneration section where air is used to burn the sulfur compounds and regenerate the sorbent. 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 Scuth Central Avenue, Roxana, Illinois The property identification number is 19-1-08-35-00-000-001

Based on the information included ... 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

The second second

Exhibit B