

BEFORE THE POLLUTION CONTROL BOARD  
OF THE STATE OF ILLINOIS

IN THE MATTER OF:	)	
	)	
CITGO PETROLEUM CORPORATION and	)	
PDV MIDWEST REFINING, L.L.C.,	)	
	)	PCB 08-33
Petitioners,	)	(Variance - Water)
	)	
v.	)	
	)	
ILLINOIS ENVIRONMENTAL	)	
PROTECTION AGENCY,	)	
	)	
Respondent.	)	

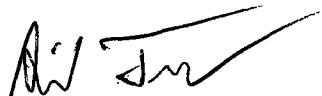
**NOTICE OF FILING**

To:

Dorothy M. Gunn, Clerk Illinois Pollution Control Board 100 West Randolph, Suite 11-500 Chicago, IL 60601	Douglas Scott, Director Illinois Environmental Protection Agency 1021 N. Grand Avenue East, P.O. Box 19274 Springfield, IL 62794-9274
Sanjay Sofat, Office of General Counsel Illinois Environmental Protection Agency 1021 N. Grand Avenue East P.O. Box 19274 Springfield, IL 62794-9274	

Please take notice that on January 22, 2008, we filed electronically with the Office of the Clerk of the Illinois Pollution Control Board the attached **Response to Board Order and Amendments to Variance Petition**, a copy of which is served upon you.

CITGO PETROLEUM CORPORATION and  
PDV MIDWEST REFINING, L.L.C.

By:   
One of Its Attorneys

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Chicago, IL 60606-6404

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**RESPONSE TO BOARD ORDER AND AMENDMENTS**  
**TO VARIANCE PETITION**

On November 14, 2007, CITGO Petroleum Corporation (“CITGO”) and PDV Midwest Refining, L.L.C. (“PDVMR”) (collectively, “Petitioners”) filed a Petition for Extension of Variance (“Petition”) with the Illinois Pollution Control Board (“Board”). On December 20, 2007, the Board issued an order (“Order”) directing Petitioners to file an amended petition providing additional information. In response to that direction, Petitioners file this response. The Board noted that the amended petition “need not repeat the entire unchanged portion of the original filing provided that a sufficient portion of the original filing is repeated so that the context of the amendment is made clear.” Order at 4 (quoting 35 Ill. Adm. Code 104.226(c)). Therefore, this Response includes changes to the original Petition in this matter, shown as black-line changes.

The Board made six inquiries in its Order, four of which are reflected in the amendments to paragraphs of the original petition as noted below. Board inquiry 4 requests a statement in accordance with 35 Ill. Adm. Code 104.210(d)(2), which requires “a statement that the

conditions of the prior variance have been fully met . . . ” Petitioner is unclear what further statement is required other than “CITGO has undertaken the activities required by the prior variance.” That statement was included precisely to meet 35 Ill. Adm. Code 104.210(d)(2). Other information included in the Petition support that conclusion, including reporting of the sample results taken at the I-55 Bridge. See Petition at ¶13-17 and Exhibit D.

In response to Board Inquiry 5, an appropriate Motion to Incorporate is filed contemporaneously with this Response to Board Order. An additional affidavit of Brigitte Postel, in support of this Response and Amended Petition, is also attached.

**PARAGRAPH 2**

[In response to Board inquiry 6, the end of Paragraph 2 in the Petition shall be amended as follows:]

2. These adjusted dates are requested so as to avoid unnecessary activities. The proposed 5-year variance has the effect of moving ~~basically moves~~ the prior schedule back 3 years. If the Board acts on this request before March 30, 2008, the final date in paragraph 10 would need to be adjusted accordingly. Further, if the Board removes the existing water quality standard for TDS in the Ship Canal, this variance will become moot according to its terms, and not require further action by the Board. The prior Variance Order is attached as Exhibit A.

**PARAGRAPH 17**

[In response to Board Inquiry 1, Paragraph 17 in the Petition shall be amended as follows:]

17. Under the Consent Decree, CITGO ~~will install~~ installed a wet gas scrubber in the Fluid Catalytic Converter ("FCC") unit at the Refinery to remove sulfur dioxide air emissions. At the time the prior variance was filed, the Refinery projected that it would be complete and operational in August 2006 (See Ex 3 in PCB 05-85). That schedule assumed that the Consent Decree (see Ex 1 in PCB 05-85) schedule required the WGS to come on line either when a turnaround of the FCC unit was completed (then scheduled for later in 2006) or by December 2007. Further discussions resulted in the conclusion that December 2007 was the critical date under the Consent Decree. As a result, the schedule for the WGS as well as the increased discharge from the WGS to the Chicago Sanitary and Ship Canal were deferred. The WGS began discharging in October, 2007. The WGS is undergoing start up and optimization activities.

The sulfur dioxide is ultimately converted to sodium sulfate salts which are contained in a purge stream. This purge stream is then discharged into the Refinery wastewater treatment system. The design specifications for the wet gas scrubber blowdown ~~will~~ limits the exit temperature to 90°F, before discharge to the basin. Other design features have been made to address nitrates and ammonia nitrogen levels and avoid the need for relief from any other regulation. The preliminary estimates are that the scrubbing system would add 304,000 lbs/day of TDS.<sup>1</sup> CITGO is monitoring the discharge as optimization continues for the new equipment.

**PARAGRAPH 24**

[In response to Board Inquiry 2, Paragraph 24 of the Petition shall be amended as follows:]

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<sup>1</sup> Assumes all sodium salts.

24. CITGO has conducted the water quality sampling for TDS as required by the existing variance. Those data continue to show elevated TDS and chloride levels during periods of snow-melt conditions. The results of the sampling upstream of the Refinery are included in Exhibit C, and the sampling at the I-55 Bridge are included in Exhibit D. It would appear that the results of sampling conducted in December, after the discharge from the WGS began, are included in Exhibit E. Based on these data there is no relationship between the discharges from the Refinery and the water quality conditions relating to TDS, either for the conditions upstream of the Refinery intake, or for the conditions at the I-55 Bridge. The recent data does not indicate an exceedance of the applicable water quality standards at the I-55 Bridge. The highest levels recently recorded was 1,300 ppm, below both the 1,500 mg/l standard for secondary contact waters upstream of the bridge and the 1,686 mg/l seasonal standard for general use waters downstream of the bridge. The significant difference that has occurred is the Board's adoption, earlier this year, of a new seasonal water quality standard of 1,686 mg/l for TDS for General Use waters below the I-55 Bridge. Adding in the Exxon-Mobil increased discharge, in combination with the increased CITGO discharge, the maximum additional TDS levels at the I-55 bridge is was projected to be 72 mg/l. See Petition, ¶26 in R 06-24 (February 7, 2006). But the data shows that the maximum TDS levels in December, 2007 were the same as recorded before the WGS discharge began. The difference between the observed sampling information for TDS and the applicable water quality standard today (even before the Board takes final action in R 07-09) is so large that it does not appear likely that the General Use water quality standard as adopted for the Des Plains River downstream of the I-55 Bridge in the proceeding initiated by Exxon-Mobil will be a relevant factor. Of course, if the Board proceeds to remove the TDS standard for all General Use waters, sampling at the I-55 Bridge will not be relevant. Moreover, the Agency

has now proposed to remove TDS as a standard for Secondary Contact waters, including the Chicago Sanitary and Ship Canal. Since we cannot predict when or how the Board may rule on that issue, this Petition has confined itself to the regulations now in effect and is requesting that the focus be moved to the conditions in the Ship Canal upstream of the Refinery, where occasional exceedances of the existing TDS standard exist.

**PARAGRAPH 25**

[In response to Board Inquiry 3, Paragraph 25 of the Petition shall be amended as follows:]

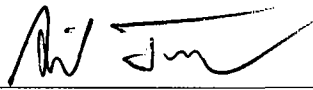
25. If, however, the data recorded at the bridge is to be used, it would appear that the extent of elevated TDS levels may be longer than previously thought -- the 2006-07 winter alone produced elevated TDS levels over a three week long stretch. While the prior variance condition assumes that storage could occur for a long enough time so that the Refinery could avoid discharging during these events, the length of time and the volume of water required is greater than assumed when CITGO put together its compliance plan for the variance in PCB 05-985. At the time of the prior variance, the available data on TDS levels in the Chicago Sanitary and Ship Canal and at the I-55 Bridge were those data being collected by the Metropolitan Wastewater Reclamation District of Greater Chicago. Those data were included in the prior variance proceeding. Based on that data, the Refinery did not expect the duration of elevated TDS levels to last for such a long period of time. It is also believed that the TDS regulations would be eliminated, and hence that measures such as wastewater storage would not be required. However, the most recent data collected pursuant to the 2005 Variance for the Refinery indicates that elevated TDS levels could still extend over a couple of weeks due to snowmelt conditions. See Petition, Exhibit D. The Refinery maximum permitted discharge is 5.79 MGD. The

quantity of tankage needed to store that volume of wastewater would be substantial (perhaps 100 million gallons for a 20-day period, assuming this period of time is a worst case scenario).

However, at the present time, CITGO is not asking for a change in the final compliance measures - should any such measures be required. If the continued monitoring of the Ship Canal (as suggested by this Petition) continues to indicate that elevated TDS levels last for a couple of weeks at a time, and if the Board does not remove the TDS standard in the Ship Canal, CITGO may seek further relief from the Board - including a change to the existing compliance plan.

WHEREFORE, CITGO requests that this Petition for Extension of Variance as amended herein be granted.

CITGO PETROLEUM CORPORATION and  
PDV MIDWEST REFINING, L.L.C.

By:   
One of Its Attorneys

Dated: January 22, 2008

Jeffrey C. Fort  
Ariel J. Teshner  
Sonnenschein Nath & Rosenthal LLP  
7800 Sears Tower  
233 South Wacker Drive  
Chicago, IL 60606-6404

12354543

STATE OF ILLINOIS )  
 ) SS.  
COUNTY OF COOK )

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**Affidavit of Brigitte Postel**

I, Brigitte Postel, being first duly sworn upon oath, depose and state as follows:

1. I have been employed by CITGO Petroleum Corporation ("CITGO") for the past four (4) years. I have worked at the Lemont Refinery since October, 2003. At Lemont Refinery, I have held the position of Environmental Engineer, Water Coordinator. I received a Bachelor of Science in Chemistry from the University of Illinois, Champaign-Urbana and a Masters of Science in Environmental Engineering from Lamar University, Beaumont Texas.

2. I have read the Response to Board Order dated January 22, 2008, and, based upon my personal knowledge and belief, the facts stated therein are true and correct.

FURTHER AFFIANT SAYETH NOT.

Brigitte Postel  
Brigitte Postel

Subscribed and sworn to me  
before this 22<sup>nd</sup> day of  
January \_\_, 2008

Rose Miglio  
Notary Public

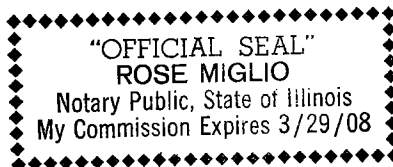




Exhibit E

<b>DES PLAINES RIVER TDS SAMPLING, I-55 Bridge</b>	
<u>Date</u>	<u>Total Dissolved Solids, mg/L</u>
11/26/2007	440
11/28/2007	440
11/30/2007	480
12/3/2007	500
12/5/2007	560
12/7/2007	790
12/10/2007	830
12/12/2007	1300
12/14/2007	1000
12/17/2007	1300
12/19/2007	1200
12/21/2007	1200
12/24/2007	1200
12/26/2007	1300
12/28/2007	1300
12/31/2007	1100
<b>Average</b>	<b>934</b>
<b>Maximum</b>	<b>1300</b>

**CERTIFICATE OF SERVICE**

The undersigned, an attorney, certifies that I have served upon the individuals named on the attached Notice of Filing true and correct copies of this **Response to Board Order and Amendments to Variance Petition** by First Class Mail, postage prepaid, on January 22, 2008.

A handwritten signature in black ink, appearing to be "A. J. [unclear]", is written above a horizontal line.

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