

BEFORE THE POLLUTION CONTROL BOARD  
OF THE STATE OF ILLINOIS

RECEIVED  
CLERK'S OFFICE

FEB 17 2005

STATE OF ILLINOIS  
Pollution Control Board

IN THE MATTER OF: )

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

Petitioners, )

v. )

ILLINOIS ENVIRONMENTAL )  
PROTECTION AGENCY, )

Respondent. )

PCB 05-85

(Variance – Water)

**NOTICE OF FILING**

To: See Attached Service List

Please take notice that on February 17, 2005, we filed with the Office of the Clerk of the Illinois Pollution Control Board, an original and nine copies each of the following:

1. Pre-filed Testimony of Claude Harmon;
2. Pre-filed Testimony of James E. Huff; and
3. Petitioners' Exhibits 1-15 in connection with the aforementioned pre-filed testimony.

copies of which are hereby served upon you.

CITGO Petroleum Corporation and  
PDV Midwest Refining, L.L.C.

By: 


One of its Attorneys

Jeffrey C. Fort  
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**THIS FILING IS BEING SUBMITTED ON RECYCLED PAPER**

**CERTIFICATE OF SERVICE**

The undersigned, an attorney, certify that I have served upon the individuals named on the attached Service List true and copies of the following: **(1) Pre-filed Testimony of Claude Harmon; (2) Pre-filed Testimony of James E. Huff; and (3) Petitioners' Exhibits 1-15 in connection with the aforementioned pre-filed testimony**, via First Class mail (unless otherwise noted), postage prepaid on February 17, 2005.

  
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## SERVICE LIST

### VIA HAND DELIVERY

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**TESTIMONY OF CLAUDE HARMON**

My name is Claude Harmon. My current position is Environmental Manager for the Lemont Refinery. I have had this responsibility since August 1994. I have been in the environmental field for 30 years including 16 years with the Illinois Central Railroad, two years with Morton International and 12 years at the Lemont Refinery, which was first owned by UNO-VEN when I began and is now operated by CITGO. I received a Bachelor of Science degree in Environmental Biology from Eastern Illinois University. I am affiliated with various environmental committees. I am a member of the National Petroleum Refiners Association. I am a member of the Illinois Association of Environmental Professionals. I am also a Certified Hazardous Materials Manager with the National Registry of Environmental Professionals.

The purpose of my testimony is to describe the current efforts by CITGO and the Lemont Refinery to reduce the Lemont Refinery's air and water emissions. The Illinois Pollution Control Board (the "Board") already is aware of the Lemont Refinery's efforts to achieve the ammonia nitrogen standard through regulatory proceedings (R84-13, R93-8 and R98-14), which led to the current site-specific limitation for ammonia nitrogen for the Lemont Refinery at 35 IAC 304.213. Last fall, CITGO and PDV Midwest Refining, L.L.C. (collectively referred to as "CITGO") completed negotiations with U.S. EPA and the environmental authorities for

Illinois, Georgia, Louisiana, and New Jersey to substantially reduce emissions of SO<sub>2</sub> and NO<sub>x</sub>, by 23,000 and 7,000 tons respectively, from three refineries including the Lemont Refinery and two asphalt plants. For the Lemont Refinery, the estimated SO<sub>2</sub> and NO<sub>x</sub> emission reductions are 15,000 and 1,100 tons respectively. That agreement was embodied in a consent decree that was approved on January 26, 2005; a copy of that signed consent decree is submitted as Exhibit 1.

The consent decree includes an ambitious construction and compliance schedule for the Lemont Refinery. To achieve the necessary reductions, the Lemont Refinery must install a wet gas scrubber in the Fluidized Catalytic Cracking Unit ("FCCU"), as well as substantial support equipment and controls. This requires a major construction project extending approximately 20 months. Exhibit 2 is a copy of the compliance schedule for the Lemont Refinery to comply with the consent decree. Stipulated penalties and other sanctions may be imposed if CITGO does not meet the consent decree schedule.

As described in our variance petition, to meet the emission requirements of the consent decree, we are installing the wet gas scrubber in the FCCU, as well as other equipment at the Lemont Refinery. (See Exhibit 3 (construction permit drawings depicting the new equipment to be installed and a description of the same)). The result is to increase the amount of total dissolved solids ("TDS") in the Lemont Refinery treated wastewater. Exhibit 4 is a copy of the Variance Petition filed in this matter on November 8, 2004, which contains further information.

One of the critical path items is to obtain a construction permit from the water division of Illinois Environmental Protection Agency ("IEPA"). Exhibit 5 is a copy of the application for that construction permit. On December 3, 2004, we submitted that construction permit application, consistent with the overall construction schedule. In preliminary conversations with the water division of IEPA, we learned of two critical issues that pose challenges for the consent decree schedule. First, IEPA will not grant the construction permit without also issuing a modified National Pollutant Discharge Elimination System ("NPDES") permit. Second, because there has been an exceedance of the TDS standard in the past, in association with snowmelt runoff, carrying road salt and similar compounds into the streams, IEPA could not issue a NPDES permit for this project unless CITGO obtained a variance from the Board. Hence, the variance petition was filed soon after the consent decree was announced publicly.

The Board has before it that variance petition. I will not repeat what we already have presented in this record. But I will respond to some of the questions propounded by the Board, as well as confirm certain information that we presented to IEPA since we began this petition process.

### **DESCRIPTION OF ACTIVITY**

*(Responses to Board Questions 4a, 4b)*

No specific projects are being developed that would increase the production rate, hence there is no impact on the amount of TDS and sulfates discharged.

The chemical used in the wet gas scrubbing process was described as "Caustic" in the construction permit application submitted to IEPA in December 2004 (Exhibit 5). "Caustic" references a Sodium Hydroxide solution.

### **PROJECTED WATER QUALITY IMPACTS**

*(Responses to Board Questions 6a, 6b, 6c, 6d)*

TDS tests for the wastewater treatment plant ("WWTP") discharge are run on a weekly basis. Below are monthly averages for year 2004:

| Yr 2004   | TDS (ppm) |
|-----------|-----------|
| January   | 2493      |
| February  | 2644      |
| March     | 2183      |
| April     | 2244      |
| May       | 1977      |
| June      | 1474      |
| July      | 1680      |
| August    | 1504      |
| September | 1699      |
| October   | 2003      |
| November  | 1948      |
| December  | 1597      |

Sulfate is not a parameter that is routinely tested for the WWTP discharge.

The proposed design flow rate was described in the construction permit application submitted to IEPA in December 2004 (Exhibit 5). The expected concentrations of both TDS and sulfates in the purge water from the wet gas scrubber were described in the construction permit application submitted to IEPA in December 2004 (Exhibit 5). Projected increases in both TDS and sulfates in the discharge after the wet gas scrubber begins operation are described in James Huff's December 2004 report "Impact of CITGO's Proposed Discharge on Water Quality" (Exhibit 6).

### **DETAILED COMPLIANCE PLAN**

*(Responses to Board Questions 9a, 9b)*

The proposed wet gas scrubber will impact the TDS and sulfate levels in the refinery's effluent once the unit becomes operational. The expected concentrations of both TDS and sulfates in the discharge are described in James Huff's December 2004 report "Impact of CITGO's Proposed Discharge on Water Quality" (Exhibit 6) and the construction permit application submitted to IEPA in December 2004 (Exhibit 5).

The negotiated compliance plan, completed to the satisfaction of IEPA, has been submitted to the Board as Exhibit 7. The proposed TDS compliance plan requires that extensive TDS data be taken from the Des Plaines River at the I-55 Bridge during the winter months. Following two seasons of stream testing, the Lemont Refinery will be able to size the required holding tank or basin for the wet gas scrubber discharge during periods of high salinity. The project for the retention system would commence by March 1, 2009. The project would be completed by the winter season beginning December 1, 2009.

### **OTHER ENVIRONMENTAL IMPACT**

*(Response to Board Question 10f)*

Currently, the only option for a managed release program would entail using the storm water basin ("SWB") for retention. The SWB is used to collect site storm water runoff and drainage from naturally existing waterways. Over the last few years, a pronounced increase in storm water volume has occurred due to residential developments near the northwest facility boundary. The runoff from these developments feeds into the naturally existing waterways that terminate within the Lemont Refinery's boundaries and ultimately end up in the SWB. Due to a

special condition in the Groundwater Management Zone Approval Letter, issued by the Bureau of Water Permit section, the SWB water level must be managed below 12'9" due to the groundwater gradient. Because of the existing difficulties associated with managing the water level below 12'9" with the additional burden created by the increased storm water runoff volume from residential developments, to try to retain the wet gas scrubber effluent during periods of snowmelt and deicing would not be a viable option at this time. However, strategies to divert the residential runoff prior to crossing the Lemont Refinery boundaries are being pursued. If a diversion project is implemented, retention of the wet gas scrubber effluent (due to snowmelt conditions) in the SWB may be feasible.



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**TESTIMONY OF JAMES E. HUFF**

My name is James E. Huff. I am Vice President and part owner of Huff & Huff, Inc., an environmental consulting firm founded in 1979. I received a Bachelor of Science in Chemical Engineering in 1970 from Purdue University and was awarded a Masters of Science in Engineering from the Environmental Engineering Department at Purdue University in 1971. I am a registered Professional Engineer in Illinois as well as in New Jersey.

I currently serve on the Board of Directors for the American Council of Engineering Companies-IL and served three years as Chair of the Illinois Environmental Protection Agency Liaison Committee for the same organization. I also serve on the Illinois Statewide Nutrient Science Committee, which is charged with proposing state nutrient standards, and am the lead consultant for the Northeastern Illinois Planning Commission ("NIPC") for evaluating Facility Planning Amendment requests for consistency with NIPC's Water Quality Management Plan.

My work experience includes two years with Mobil Oil as an Advanced Environmental Engineer during the construction and start-up of the Joliet Refinery. My responsibilities at the Joliet Refinery included the construction oversight and start-up of the wastewater treatment facilities, technical support for the wastewater treatment including sampling, discharge monitoring reports, and National Pollutant Discharge Elimination System ("NPDES") permit preparation. From this experience, I am familiar with refinery operations and the associated wastewater treatment, as well as the Des Plaines River.

After leaving Mobil in the fall of 1973, I was employed for three years at IIT Research Institute in the Chemical Engineering Department, working on advanced wastewater treatment projects including catalytic oxidation of cyanide in petroleum wastewaters. I also assisted in preparing the Economic Impact/Cost-Benefit Analysis on a proposed total dissolved solids ("TDS") rule change in Illinois. I then spent four years with Armak Company, now called Akzo Nobel Chemicals. I was the Corporate Manager of Environmental Affairs responsible for regulatory compliance and engineering design of environmental systems at nine manufacturing facilities in the United States and Canada including fatty amines plants in McCook and Morris, Illinois.

For the last 25 years at Huff & Huff, Inc., I have been involved in over 30 environmental impact studies associated with the impact of wastewater discharges on receiving streams throughout the United States. Some of these studies have involved TDS, sulfates, and chlorides. Surveys I have been involved with in Illinois have included the following streams:

- Chicago Sanitary and Ship Canal
- Des Plaines River
- Casey Fork Creek
- Aux Sable Creek
- Flint Creek
- Mill Creek
- Thorn Creek
- Kent Creek
- Fox River
- Mississippi River
- Deer Run Creek
- Salt Fork of the Saline River
- Cedar Creek
- Tyler Creek
- Kiswaukee River

These stream surveys have included water quality, fish, macroinvertebrate, mussels and sediment quality. I also have completed mixing zone studies on the large streams listed above.

I have worked with the Lemont Refinery for the past 22 years on various wastewater issues including two adjusted standards relating to ammonia, a mixing zone study, collection of macroinvertebrates in the Ship Canal, modeling of ammonia from the Lemont Refinery all the way down the Illinois River, preparation of a Storm Water Pollution Prevention Plan for the Lemont Refinery, and preparation of environmental training modules for a variety of subjects.

I have been retained by CITGO Petroleum Corporation's Lemont Refinery to assist in the evaluation of alternatives for the wastewater stream generated by the new FCC wet gas scrubber, identifying water quality impacts, preparing the construction permit and NPDES permit modification applications, and providing technical support on the variance petition. A copy of my resume is presented in Exhibit 8.

Presented herein is a description of the areas I have investigated that are related to the variance petition, which incorporates questions raised by the Illinois Pollution Control Board (the "Board") and Illinois Environmental Protection Agency ("IEPA" or the "Agency") in these same areas.

### **APPLICABLE REGULATIONS**

The requested variance is for TDS in the Chicago Sanitary and Ship Canal and the Des Plaines River. The wet gas scrubber discharge will contain significant sodium sulfate, which essentially is the source of the TDS subject to the variance request. To the I-55 Bridge, the Des Plaines River is classified as a *Secondary Contact* waterway with a TDS water quality standard of 1,500 mg/L. From the I-55 Bridge downstream, the Des Plaines River is classified as *General Use* with a TDS water quality standard of 1,000 mg/L.

There are no water quality standards on sodium. The sulfate *General Use* water quality standard is 500 mg/L. There is no *Secondary Contact* water quality standard for sulfate. The proposed discharge will not cause or contribute to a sulfate water quality exceedance, and therefore a variance for the sulfate component is not requested.

### **EXISTING WATER QUALITY DATA**

*(Responses to Board Questions 7a and 10b; IEPA Recommendation Comments 15 and 19)*

The Lemont Refinery has collected TDS samples from the Chicago Sanitary and Ship Canal weekly from 1998 to 2005. Exhibit 9 presents these eight-plus years of data, collected upstream of the Lemont Refinery's wastewater discharge. To date, no TDS water quality exceedances were recorded in 1998, 1999, 2000, 2001, 2003, 2004, and 2005. In 2002, one exceedance occurred on March 8, 2002 when a TDS level of 1,636 mg/L was recorded.

A previously submitted document entitled "Impact of CITGO's Proposed Discharge on Water Quality" (Exhibit 6) contains TDS data collected by the Metropolitan Water Reclamation

District of Greater Chicago ("MWRDGC") on the same waterway from 2000 to 2002. At the Lockport Lock & Dam, downstream of the Lemont Refinery outfall, one TDS exceedance (1,595 mg/L) was documented on January 4, 2001. (The Lemont Refinery recorded 1,408 mg/L on January 5, 2001.) At the next station, Jefferson Street in Joliet, one TDS exceedance (1,535 mg/L) was recorded on February 24, 2000. Further downstream at the Empress Casino, one exceedance (1,867 mg/L) was recorded also on February 24, 2000. At the I-55 Bridge, where the *General Use* water quality standard begins, the 1,000 mg/L standard was exceeded on the following dates:

|           |   |            |
|-----------|---|------------|
| 3/16/2000 | - | 1,902 mg/L |
| 1/25/2001 | - | 1,194 mg/L |
| 2/1/2001  | - | 1,075 mg/L |
| 2/8/2001  | - | 1,139 mg/L |

The last three occurred over three consecutive sampling events, implying that the TDS excursion was persistent for at least 15 days.

A review of all of the TDS data (Exhibits 6 and 9) reveals that all of the elevated TDS readings occur in the winter, and are attributable to snowmelt runoff carrying salt runoff from highway deicing activities. The Agency's Recommendation Comment 15 states that no information has been provided between the discharge and downstream water quality standard violation. Assuming during snowmelt the streams are at their harmonic mean flow, the flow at the I-55 Bridge would be 3,690 cfs.<sup>1</sup> This is a conservative flow estimate. At 1,000 mg/L TDS, this translates into 20,000,000 pounds per day of TDS passing beneath the I-55 Bridge. The Lemont Refinery wet gas scrubber will contribute an average 215,000 pounds per day, or approximately 11 mg/L, or 1 percent of the total loading under this scenario. According to *Standard Methods*, the precision of the TDS test method with a known sample TDS concentration of 293 mg/L when tested in 77 samples yielded a standard deviation of 21.20 mg/L. In essence, the contribution from the Lemont Refinery will be less than the precision of this test when the Des Plaines River exceeds 1,000 mg/L. Note, when the 1,902 mg/L TDS was recorded in the Des Plaines River, this is equivalent to 38,000,000 pounds per day of TDS, and the Lemont Refinery's contribution would be on the order of 0.6 percent of the total loading.

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<sup>1</sup> Harmonic Mean Flows for Illinois Streams, ISWS, 1991.

There is a strong correlation between the upstream TDS readings and the downstream TDS readings. This is to be expected as TDS is considered a "conservative" pollutant; that is, there is little or no reduction due to chemical or biological processes. In addition, the preponderance of flow at the I-55 Bridge originates from the Chicago Area, so there is limited dilutional effects until further downstream.

### **TOXICITY/FUTURE POSSIBLE CHANGES IN WATER QUALITY**

Water quality standards historically have been developed based on toxicity. As TDS is composed of a variety of anions and cations, there are no "toxicity" values that can be applied to the generic TDS parameter. Sulfates and chlorides make up the majority of the anions, and these compounds typically are regulated. In Illinois for *General Use* waters, TDS, sulfates and chlorides all are regulated.

Several years ago, IEPA began a detailed review of these water quality standards that by early 2004 led the Agency to hold a stakeholders' meeting. The Agency, at this point, believed that technical data supported elimination of the TDS water quality standard and increasing the sulfate *General Use* limit to approximately 1,800 mg/L. Information provided to the stakeholders by the Agency on this issue is included in Exhibit 10.

U.S. EPA's review of the Agency's work has lead to additional toxicity testing by the State of Illinois, which is ongoing and expected to be completed by September 2005. If the additional toxicity tests are consistent with the previous research, the Agency is expected to propose these changes in water quality standards in the fourth quarter of 2005.

The Agency's efforts are relevant to the Lemont Refinery's petition, as it goes to the environmental impact the proposed discharge will have; that is, sodium sulfate, at the proposed levels discharged, will not impact the aquatic community in the Chicago Sanitary and Ship Canal or in the Des Plaines River. There is no adverse effect on aquatic life due to TDS and sulfate levels.

### **PROJECTED EFFLUENT CONTRIBUTION**

*(Responses to Board Questions 6 and 11)*

The projected effluent contribution was described in my report, "Impact of CITGO's Proposed Discharge on Water Quality" (Exhibit 6), and will average 215,000 pounds per day of

TDS. The loadings were further described in the construction permit application submitted to IEPA in December 2004 (Exhibit 5), and also in the NPDES permit modification application submitted to the Agency in August 2004 (Exhibit 11). Exhibit 12 is a copy of the existing NPDES permit.

### **PROJECTED WATER QUALITY IMPACTS**

*(Responses to Board Questions 10b, 10c, 10d, 10e)*

The projected incremental increase in both TDS and sulfates in the Chicago Sanitary and Ship Canal and in the Des Plaines River were described in my December 2004 report "Impact of CITGO's Proposed Discharge on Water Quality" (Exhibit 6). This analysis was done based on the 7-day, 10-year low flow rates in the streams, and relied on the 1992 mixing zone study completed by Huff & Huff, Inc. for the Lemont Refinery. (This mixing zone study was provided to the Board as part of the Lemont Refinery's Ammonia Adjusted Standard request, R93-8.) The effluent design has not changed since that study, and remains valid with the added flow of 274,000 gallons per day from the wet gas scrubber.

### **ALTERNATIVES**

*(Responses to IEPA Recommendation Comment 17 and Board Questions 8 and 10f)*

Huff & Huff, Inc. considered several alternatives for this 274,000 gallons per day stream. Deep well disposal initially was evaluated along with direct discharge. The Agency determined that the injection of this waste stream would constitute a Class I underground injection well in Illinois. (See Exhibit 13.) Class I wells require injection beneath a cap rock that will prevent migration upwards into higher aquifers. Northeastern Illinois does not have a cap rock above the Mount Simon formation used for disposal wells throughout the Midwest, and therefore this alternative was not viable.<sup>2</sup>

Based on the TDS stakeholders' meeting in early 2004, direct discharge appeared to be the logical alternative to deep well disposal. I had anticipated that the Agency TDS and sulfate rule change would have gone to the Board by mid-2004, which possibly would have made this variance request unnecessary. This did not happen, and the Agency position that the addition of

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<sup>2</sup> See Evaluation of Underground Injection of Industrial Waste in Illinois, by R. Brown and A. Visocky, ISGS, 1989.

this wastewater stream would contribute to the existing TDS violations that periodically occur due to salt runoff from highway deicing activities leads to this variance request.

The Board has heard numerous requests over the years for variances from the TDS water quality standards and these requests consistently have found evaporation technology cost- and energy- prohibitive. The evaporation costs are described in Exhibit 14. These costs were derived from Rhodia's adjusted standard request, using scale-up factors.

### **TDS COMPLIANCE PLAN AND SCHEDULE**

Exhibit 7 is a proposed TDS compliance commitment, which includes tasks and schedules. The plan calls for extensive TDS data collection from the Des Plaines River at the I-55 Bridge during the winter months. After two seasons of stream testing, the Lemont Refinery will be in a position to size the necessary holding tank or basin for the wet gas scrubber discharge during periods of high salinity. Physical construction of the holding tank or basin would begin by March 1, 2009, and construction would be complete for the winter season beginning December 1, 2009.

### **RESPONSES TO BOARD QUESTIONS 5, 7b, 10b, 10e, 12**

**5. *Clarify whether Best Available Technology ("BAT") applies only to ammonia.***

In the testimony of Robert Stein of Aware (R98-14), Mr. Stein compared the entire wastewater treatment facilities to the federal BAT requirements. Mr. Stein concluded: "[o]ur analysis of the Lemont Refinery wastewater treatment system indicates that it exceeds the BAT technology for refinery wastewater treatment as presented in the 1982 U.S. EPA Development Document." The BAT determination applied to the total wastewater stream, not just those that applied to ammonia.

**7b. *Have modeling studies been completed to better define the impact on water quality violations?***

As noted earlier, TDS is considered a conservative pollutant, so modeling after mixing essentially is a mass balance. A mass balance approach was used to predict the incremental change and average TDS and sulfate levels with the addition of the proposed discharge. This was presented in my December 2004 report, "Impact of CITGO's

Proposed Discharge on Water Quality" (Exhibit 6). The mixing zone study from 1992 was utilized in this same report.

**10b. *Please comment on the impact of the sulfate loading.***

The sulfate impact is presented in my December 2004 Report "Impact of CITGO's Proposed Discharge on Water Quality" (Exhibit 6), and will amount to an average of 142,000 pounds per day.

**10e. *Please indicate if the current and amended NPDES permits allow for mixing of Outfall 001?***

The mixing zone study was part of the record in the Lemont Refinery's Adjusted Standard request (R93-8), and was incorporated in R98-14. This mixing zone study was an integral part of the ammonia adjusted standard, which was relied upon by the Agency in the issuance of the NPDES permits. Based on this, the answer is yes, the current and amended NPDES permits allow for mixing.

**12. *Would you propose interim effluent limits on TDS and sulfates? Would you propose monitoring?***

A proposed TDS compliance plan has been submitted as Exhibit 7. This compliance plan includes extensive stream monitoring.

Interim effluent limits are not proposed. First, no water quality violations of the sulfate water quality standard will occur; therefore, there is no basis for sulfate effluent limits.

For TDS, it is clear that the TDS water quality violations are due solely to salt runoff from highway deicing activities. The proposed discharge will not change this fact. Limiting the discharge from the Lemont Refinery, if possible, would not change the number of TDS water quality violations in the Ship Canal or at the I-55 Bridge, as the FCC wet gas scrubber will be contributing on the order of 1 percent of the total salinity loading during these excursions.

The Agency historically has taken the position that the occurrence of water quality exceedances downstream of a discharger of the same pollutant does not necessarily lead to a more restrictive permit limit or enforcement action. As noted by the Agency in a letter from Dean J. Studer, Supervisor, Southern Municipal Unit, Permit Section of IEPA,



to Steven Davis, Galesburg Sanitary District, November 15, 2004: "[t]he intent of the Agency was, and still is, that a District action must be responsible for a violation of the water quality standard before it is considered a permit violation." (See Exhibit 15.) The Lemont Refinery request also would seem similar to the Village of Wauconda's recent NPDES permit, where the Agency, with knowledge of dissolved oxygen violations downstream, concluded that lowering the effluent BOD5 limit was not necessary "since it is believed that this effluent will not cause or contribute to a violation of water quality standards." (Response to Comments, Questions and Concerns regarding the Village of Wauconda's NPDES Permit, at p. 13.) As further noted by the Agency, "[t]his information is limited; the extent to which it is representative of normal stream conditions and its relationship to Wauconda discharge is unknown." The Agency included dissolved oxygen monitoring in the NPDES permit for Wauconda to collect additional data, and the Lemont Refinery's Compliance Plan includes a similar data gathering period.

The Lemont Refinery will have no control over the TDS concentrations, so the only possibility to control the pounds per day discharged is by limiting the discharge rate. This means the Lemont Refinery essentially would have to hold treated effluent. Presumably, if the Des Plaines River TDS is greater than 1,000 mg/L at the I-55 Bridge, the Lemont Refinery would have to cease all discharge. Today, there is no storage capacity at the Lemont Refinery to achieve this concept. As described earlier in my testimony, these violations appear to occur for over 15 consecutive days, but less than 22 days. The Lemont Refinery will have to come up with in excess of 4,000,000 gallons of capacity to isolate the wet gas scrubber during these periods of elevated TDS levels at the I-55 Bridge. Currently, this excess capacity does not exist, and the actual number of days that would require holding wet gas scrubber water currently is poorly understood. The requested compliance time frame is for the collection of the necessary data to properly size this holding basin/tankage. Providing some interim effluent TDS limit will provide no benefit to the receiving water, based on the Agency-generated information contained in Exhibit 10.