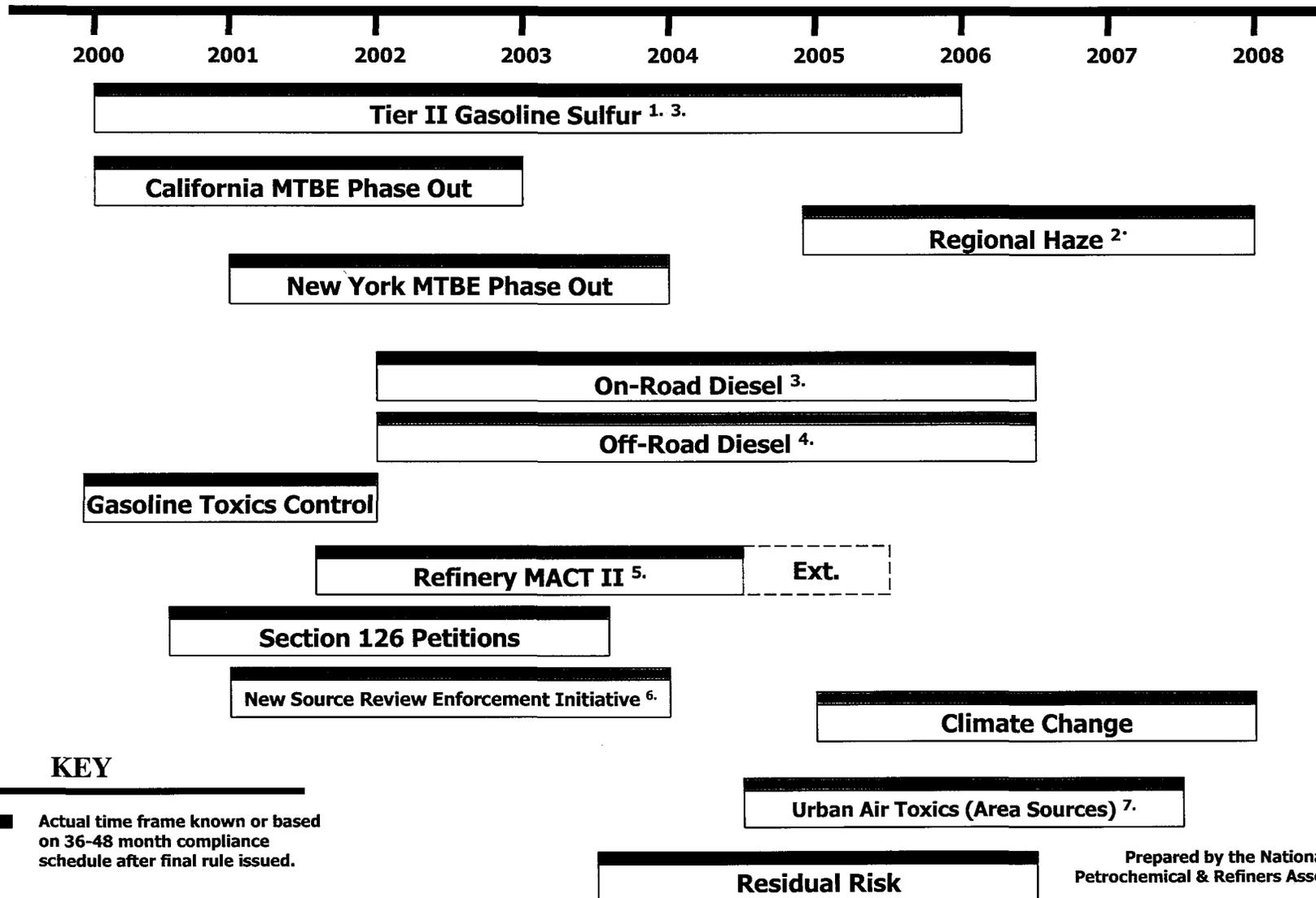


Cumulative Regulatory Impacts on Refineries, 2000 - 2008



KEY

- Actual time frame known or based on 36-48 month compliance schedule after final rule issued.
- Compliance Requirements unknown and time frame estimated.

Prepared by the National
Petrochemical & Refiners Association
January 31, 2001

National

The New York Times



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November 9, 2001

Judge Blocks Evangelist's Effort to Reopen a Refinery

By GREG WINTER

SANTA FE SPRINGS, Calif., Nov. 8 — Browning with age, its spires slowly rusting, the old Powerine oil refinery sits dormant after decades of bellowing smoke so thick that residents complained it took the paint off their cars.

For the last three years, Pat Robertson, the television evangelist, has been trying to start it again, but the going has been rough.

First, Mr. Robertson accused large oil companies of intimidating bankers so they would not lend him money.

And today, an order by a federal district judge in Los Angeles took effect, temporarily stripping the oil company that Mr. Robertson controls, Cenco Inc., of its permits and halting its plans to turn crude oil into gasoline for charitable purposes.

"The public interest favors enforcing the Clean Air Act and protecting the environment," Judge A. Howard Matz wrote. Reopening the refinery without installing the latest pollution controls, Judge Matz added, presented "the possibility of irreparable harm."

Although the case will probably not be decided until next year, the company said that it has complied with all environmental regulations, and is appealing the ruling.

With \$20 million from his charitable trust, Mr. Robertson formed Cenco in 1998 to buy the refinery, hoping to turn California's thirst for gasoline into a generator of revenue for his work. At the time, court records show, Mr. Robertson was Cenco's sole board member. He remains its president. Cenco estimates it will cost more than \$100 million to get the refinery running.

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When Mr. Robertson's charitable trust is liquidated, his associates said, any profits from the refinery will go to charity. But they said they did not know when that might be.

Flanking the refinery in Santa Fe Springs, about 16 miles from Los Angeles, are a hospital, a home for the elderly and an elementary school. In addition to the environmentalists who filed the lawsuit, many residents of the neighborhood, which is about 70 percent Latino, also oppose the reopening of the plant.

Marching outside the refinery gates, protesters have accused Mr. Robertson, the founder of the Christian Coalition, of environmental racism and have dragged his effigy in the streets, depicting him with devil's horns and a pointy red tail.

"Mr. Robertson underestimated how strongly the majority of citizens feel about reopening this refinery," said Luis Gonzalez, the town's mayor and one of the few city officials to oppose Cenco from the start. "It's one of the reasons why I got elected."

Mr. Robertson declined to comment on the dispute, his aides said, because he was busy "praying for the nation" and did not want to "divert his attention elsewhere."

In its second term, the Clinton administration vigorously enforced a provision of the Clean Air Act requiring companies to install the most advanced pollution controls on any new sources of emissions, whether the pollution comes from new plants, existing ones that increase their output or old plants that reopen.

The energy industry says this enforcement has stifled its efforts to expand production, contributing to the energy disruptions of the last few years.

The Bush administration has been sympathetic to the industry's argument and begun looking at ways to ease the environmental restraints on power plants, oil refineries and other sources of pollution.

By a strange mixture of strategy and circumstance, the Cenco case, which has mushroomed into legal battles on both coasts, could ease them further. Cenco's lawyers have challenged in federal court in Washington the requirement that closed refineries and power plants install modern pollution controls when they reopen.

J. Nelson Happy, who left his post as dean of the law school at Pat Robertson's Regent University to run Cenco, said that the company met all local environmental standards. In addition, he said, it has also settled a lawsuit filed by the environmental agency, providing what he said

would be a road map for retrofitting the refinery.

Yet environmentalists were able to get Judge Matz to block the refinery's operations.

"It's an important case because it has the potential to greatly increase air pollution," said David G. Hawkins, a director at the Natural Resources Defense Council and the leader of Environmental Protection Agency's air pollution division in the Carter administration. "In many cases, these older facilities shut down to avoid putting on modern pollution controls."

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	Petroleum Industry Position Statement as of 10/17/01
Scope	Facility-wide, covering new and existing units within a stationary source. Stationary source refers to a facility which emits air pollutants subject to the Clean Air Act. It may contain multiple units and multiple emission points
Timing	No differentiation on the timing of the elements of the market-based approach. Existence of state programs in TX, NJ, OR, and SCAQMD and new Illinois/Chicago program indicates viability of all elements of the approach including trading.
Effect on NSR	<p>This proposal is a voluntary compliance alternative to NSR as long as the facility remains within the pollution CAPs <i>regardless of nature of change (physical, operations, repairs, maintenance, replacement of units, etc.)</i>.</p> <p>Compliance with the PAL would determine the applicability of major NSR and, if available under state rules, minor NSR. PALs are available in both attainment and non-attainment areas.</p>
Pollutants	Pollutant-specific, covering only criteria pollutants (NOx, SO2, PM, CO, VOC) measured as total actual emissions in tons per year.
Means of Compliance	Performance based compliance - technology not mandated. Compliance with CAPs demonstrated annually using data from CEMs or parametric monitoring. NSPS and other regulations are used only as a guide in setting emission CAPs. Compliance is facility-based, not by individual emission point.
Enforcement	Annual exceedances of CAPs are self-correcting through the purchase of unused credits from other facilities, or adding controls under a compliance schedule.
Initial CAP or Benchmark	<p>The initial CAP or benchmark for attainment and non-attainment areas is set for each pollutant based on a performance standard reflecting improvements in air quality, and using existing technology standards as a guide. The CAP is established from the application of the performance standards (e.g., NSPS) to each emission unit at all subject facilities. Emission sources may be above, at, or below the performance standard. The controls are not required to be installed on units, rather the CAP is determined as if controls have been installed, the refinery has freedom to meet CAP levels in any manner available.</p> <p>Because the basis for the CAP is existing air quality as well as needed improvements in air quality, the performance standard used to determine the initial CAP for attainment and non-attainment areas may be different. With respect to attainment areas the purpose of PSD is to manage economic growth in a manner consistent with concerns for good air quality.</p> <p>Refineries that have settled NSR issues with EPA may set their First Term Ending CAP at the level achieved after installation of the controls agreed to in the settlement</p>
State Participation in setting the Initial CAP	In an attainment areas the state may choose to develop a pollutant budget for all sources which is based on improving air quality by maintaining or reducing the existing state or regional emission inventory and, where appropriate, on impacts to Class I areas. In addition, a State may choose to develop a budget to manage economic growth in a manner consistent with concerns for good air quality. In a non-attainment area, the State through its SIP process will develop a pollutant

	<p>budget to achieve air quality improvements.</p> <p>The state may choose to modify the initial CAP in attainment and non-attainment areas to reflect air quality improvements. Each facility's pollutant CAPs would be adjusted based on its allowable portion of the pollutant budget.</p>
CAP Adjustment	<p>CAPs may be increased by "allowable" emissions for new or modified units that receive major NSR permits that reflect BACT or LAER.</p> <p>CAPs may be adjusted downward to achieve air quality improvements or if a new state or federal rule is developed which requires lowering of emissions at a unit covered by the PAL.</p> <p>There is no required or declining CAP adjustment based on an anniversary date.</p>
Trading	<p>Emission trading allowed between sources within a facility and between facilities in same airshed. The trading provision allows emission reductions to occur at the lowest cost. The better-controlled facilities will be able to sell emission credits. This provides a market-based incentive to operate below the CAPs. In development of the trading program, it is important to be sensitive to Environmental Justice, toxics and transport issues.</p>
Implementation of Trading and a PAL	<p>EPA needs to provide an option in the federal PSD/NSR rules to make changes that would otherwise require a permit to be exempt from NSR permitting so long as the change does not exceed the plant-wide CAP. There would have to be reference that the plant-wide CAP could be met by obtaining emission credits EPA could create some generic SIP language that states could adopt when they are administering the PSD/NSR program.</p> <p>EPA's emission trading policy guideline would have to be expanded. There may be a limit on the SIP required reductions can come from emissions trading.</p> <p>Emissions trading and capping would be used for both ongoing permit changes as well as for use when there are required SIP reductions due to non-attainment.</p> <p>A further emphasis on state solutions would also be helpful in an EPA guideline. Statement that EPA supports states developing novel programs in area sheds when the purpose is meeting already established clean air goals. It is important to ensure state and locals are getting the brightest green light possible to develop programs that work for them.</p>
Life of PAL	<p>There is no expiration date of the PAL just as there is no expiration of a NSR/PSD permit to construct. However, there may need to be periodic demonstrations of compliance with the PAL.</p>
Public Involvement / Review	<p>Notice of intent to obtain or modify permits would be in accordance with all federal, state and local regulations.</p>
Recordkeeping	<p>An annual report of emissions shall be submitted to any air pollution program having jurisdiction. All records needed to verify annual emissions shall be kept on file for a period of 5 years</p>

US Refining Industry Faces Unique Challenges

The refining industry has dramatically reduced its direct and indirect (from products) emissions under the Clean Air Act. According to EPA data, between 1980 and 1999, the refining industry reduced emissions of criteria air pollutants by over 77%.

- US refineries have been operating at or near maximum rates for several years -- 95% of capacity or higher. Manufacturing industry considers 85% utilization as full capacity.
- High utilization rates are expected to continue. This places a premium on routine repair and maintenance to prevent/minimize equipment outages.
- Refiners often have fewer alternative supply sources in the event of an outage. Unlike utilities which may be able to quickly switch sources within the power grid, compensating for lost refinery production will require time to ship additional product from outside that region, if available.
- Refinery operations are continuous and complex. Refineries depend on simultaneous operation of many individual, but inter-related, pieces of equipment. Inability to promptly change or improve operations of a single unit of equipment can have significant cumulative impact on refinery operations and its output (fuel production).
- Equipment and manpower to maintain and/or modify refineries is in demand. Complex maintenance (refinery "turnarounds") and/or major equipment modifications often are scheduled years in advance to ensure equipment/manpower availability. If this availability "window" is lost due to delays, it may take a long time to reschedule.
- US refiners face an avalanche of far-reaching regulatory requirements in the next few years. Substantial changes in refinery operations will be needed and the cost of meeting new clean fuels requirements could exceed \$20 billion. The overlapping implementation dates for these regulations place an even greater strain on equipment/manpower availability.
- The US refining industry is already heavily regulated -- both in terms of facility emissions and product specifications.
- From 1990-1999, the US petroleum industry spent over \$90 billion on environmental expenditures. More than half of that was spent by refiners. These investments resulted in significant emission reductions (e.g. VOC reductions through MACT I, MACT-marine, benzene NESHAP, SOCMA HON, etc.)

Refining and Electric Utility Sectors Differ Substantially

- Composition of emissions vary significantly by sector:
 - Among the 6 criteria pollutants, electric utilities' largest emissions are SO_x and NO_x.
 - Refineries' NO_x emissions (48 thousand short tons) equal only .8% of electric utilities (5,715 thousand short tons);
 - Refineries' SO_x emissions (224 thousand short tons) equal only 1.9% of electric utilities (12,698 thousand short tons);
 - Refineries' largest criteria pollutant emissions were carbon monoxide (CO). Refinery CO emissions were 332 thousand short tons vs. 445 thousand short tons of CO emissions from electric utilities.
 - Refineries' volatile organic compound (VOC) emissions exceeded those from electric utilities (149 thousand short tons vs. 46 thousand short tons). However, refineries' VOC emissions declined by 51.6% between 1990 and 1999, while electric utilities' VOC emissions increased.
 - Refineries had less than 1% of total mercury air emissions compared to 32.6% for utilities (1997 EPA Report to Congress).
- Refinery products (gasoline and diesel fuel) have been redesigned to reduce emissions. Thus, air quality benefits associated with refinery operations are being realized outside the refinery itself.
- Refinery emissions are tightly controlled:
 - VOCs: Between 1990 and 1999, emissions of volatile organic emissions were reduced by 51.6%.
 - NO_x: Emissions of nitrogen oxides were essentially flat in this period despite increased utilization rates.
 - SO_x: Sulfur dioxide emissions decreased by 19.7% from 1990 to 1999.
- The cost of emission reductions is quite different:
 - Cost-effectiveness estimates offered by the states to the Ozone Transport Assessment Group (OTAG) indicate that utility NO_x emissions could be controlled for \$1000-2000 per ton per year. In contrast, emission reductions from non-utility sources (including refineries) are likely to cost at least four times more (making their cost-effectiveness about 1/4 of that of utilities).

FOOTNOTES:

1. Longer compliance time for refineries in Alaska and Rocky Mountain states and small refineries covered by Small Business Regulatory Enforcement and Flexibility Act (SBREFA). Additional compliance time is available for these refineries if they produce ultra low sulfur highway diesel beginning in 2006.
2. Regional haze State Implementation Plans (SIPs) due 2005-2007. Earliest compliance date. Schedule may be impacted by National Ambient Air Quality Standard (NAAQS) litigation.
3. Longer compliance time for small refiners covered by SBREFA.
4. Estimated effective date based on proposed heavy duty vehicle standards.
5. Compliance date may be harmonized with Tier II schedule.
6. Based on Clinton Administration EPA statements to press. Estimated date for implementation.
7. Urban Air Toxics Strategy includes potential controls of gasoline loading facilities at refineries. Estimated compliance schedule.



MEMPHIS AND SHELBY COUNTY HEALTH DEPARTMENT

YVONNE S. MADLOCK
Director

JOHN B. KIRKLEY, M.D.
Interim Health Officer



JIM ROUNT
Mayor of Shelby County

DR. W. W. HERENTON
Mayor of Memphis

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November 2, 2001

Dale R. Morris
Environmental Manager
Williams Refining & Marketing, L.L.C.
P.O. Box 2930
Memphis, TN 38101



XC:DFB
DNP
JTB
FAX: C. BUTKY

SUBJECT: Tier 2/Refinery Expansion PSD Permit Application Deficiencies

Dear Mr. Morris:

Pursuant to City of Memphis Code Section 16-77 [Reference T.A.R 1200-3-9-.01(4)(I)], the Department has reviewed the referenced application submitted on October 5, 2001 and has identified deficiencies. In the event of deficiencies, the date of receipt of the application shall be the date all required information is received at the Department. Not later than six (6) months after the Department receives a complete application, the Department is required to complete the 30-day public comment period for the Preliminary permit determination and issue the Final permit determination. For that reason, "all required information" is all information required to make these determinations. Deficiencies are outlined below:

1. Table 1-5 on page 1-6 must list estimates for Total Reduced Sulfur compounds, Hydrogen Sulfide, Sulfuric Acid Mist, and Lead instead of showing dashes.
2. Table 6-1 on page 6-1 must list all process heaters subject to Best Available Control Technology (BACT) for CO, PM₁₀, and NO_x. Table 6-1 lists only some of these heaters and the first paragraph on page 6-1 states that no other refinery process heaters are subject to BACT analysis.

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Williams is subject to a plantwide emission limit for each pollutant in its 1998 PSD Permit. On October 19th, Williams representatives stated that it is requesting an increase in the plantwide emission limits in the Tier 2/Refinery Expansion PSD permit application. BACT applies to each emissions unit at which a net emissions increase would occur as a result of increasing the federally enforceable plantwide limit in the issued 1998 PSD permit.

3. Documentation of the basis of the \$7,900 per ton of NO_x removed figure for Selective Catalytic Reduction (SCR) in conjunction with Ultra Low NO_x Burners (ULNB) listed on page 6-13 in Section 6.6.1.1 is required. EPA guidance for Tier 2 projects lists cost effectiveness ranges for 150 MMBtu/hr and 350 MMBtu/hr heaters. Interpolating, the range for a 200 MMBtu/hr heater would be \$3800 to \$5400 per ton of NO_x removed. The Department cannot conclude that the SCR/ULNB control technology combination is economically infeasible for the proposed 2000 MMBtu/hour heater based on the submitted application.
4. BACT must be re-evaluated for H₂S. On page 7-1 a BACT emission limit of 162 ppmvd in the refinery fuel gas was proposed, but this emission limit is the same as the New Source Performance Standard. A New Source Performance Standard is a starting point or "floor" for a BACT analysis, not the endpoint. Williams is currently achieving emissions levels well below this concentration, and control technology now available at the applicant's refinery is within the universe of Best Available Control Technology to be evaluated.
5. BACT must be re-evaluated for emissions from the FCCU Regenerator. On page 8-1 in Table 8-1 proposed BACT limits are significantly higher than emissions levels currently achieved by Williams, and control technology now available at the applicant's refinery is within the universe of Best Available Control Technology to be evaluated.
6. The netting analysis must be resubmitted to show actual-to-potential emission rates and to include emissions from the CCR catalyst regenerator. Appendix A does not show actual-to-potential emissions rates for all pollutants evaluated.
7. The netting analysis must be resubmitted using a 5-year contemporaneous period for all pollutants evaluated.
8. A representative period other than a two-year period selected should be used to assess emission increases and decreases for emissions units affected by the CCR installed in May of 2000 due to the large changes in emissions last year, as shown in attachment 1.

9. Emissions calculations must include PM₁₀ from the cooling towers in the netting calculations. The BACT analysis should evaluate the control of cooling tower PM₁₀ emissions.
10. Emissions from the West Memphis terminal were not listed in the permit application and may need to be added if U.S. EPA Headquarters determines that aggregation is required. A letter is expected shortly from EPA Region IV to clarify this issue.
11. In order for the Department to evaluate the likelihood of violations of the National Ambient Air Quality Standards during periods of startup and shutdown, information concerning typical frequency, duration and emission rates during a representative period such as the last one or two years should be submitted. Such records will be required in the Tier 2/Refinery Expansion PSD permit because these emissions count towards compliance with the plantwide emissions limits.

Williams' representatives have expressed the desire to receive the PSD construction permit as soon as possible, especially for the Tier 2 Sulfur Reduction project. Williams is facing federally mandated deadlines to produce low sulfur gasoline by January 2004. In order to address this concern, the Department refers to EPA guidance on expedited Tier 2 PSD permit applications. This guidance is found in a memorandum from John S. Seitz dated January 19, 2001 and is entitled, "BACT and LAER for Emissions of Nitrogen Oxides and Volatile Organic Compounds at Tier2/Gasoline Sulfur Refinery Projects".

If the PSD permit application identifies the "major modification" components specific to the Tier 2 project and agrees to install BACT controls as recommended in the above referenced memorandum, both the Department and EPA would expedite issuance of the PSD construction permit for the equipment components necessary for Williams to meet the federally mandated low sulfur gasoline provisions. A final determination would be issued for the expansion equipment components as soon as practicable thereafter, but within six-months after receipt of a complete permit application previously mentioned. The Department offers this permit processing option in response to the concerns Williams representatives noted at the October 19th meeting. The Department does not wish to jeopardize the important Tier 2 project due to delays in evaluating the expansion project portion of the PSD application and believes that this option is a reasonable one to ensure that Williams receives the necessary approvals to start the Tier 2 construction as soon as possible.

A copy of the November 1, 2001 comments signed by Kay T. Prince, Air Programs Branch Chief of EPA Region IV is attached to this letter (Attachment 2). These comments should also be addressed.

We look forward to receiving the additional information so that the permit can be deemed complete at the earliest possible opportunity. If you have any questions, please do not hesitate to contact me at (901) 544-7775.

Cordially,

A handwritten signature in cursive script that reads "Diane L. Arnst".

Diane L. Arnst, Attorney-at-Law
Manager, Pollution Control Section

Enclosures

cc: Helyn L. Keith
Jim Little, USEPA Region IV
Katy Forney, USEPA Region IV

Attachment 1



DR. W. W. HERENTON
Mayor of Memphis

MEMPHIS AND SHELBY COUNTY
HEALTH DEPARTMENT

YVONNE S. MADLOCK
Director

JOHN B. KIRKLEY, M.D.
Interim Health Officer



JIM ROUT
Mayor of Shelby County

October 29, 2001

Mr. Charles R. Buttry
Trinity Consultants
10025 W. Markham
Suite 245
Little Rock, AR 72205

Re: Emission Changes at Williams Refinery

Dear Mr. Buttry:

During the October 19, 2001 meeting held at the Health Department, a question arose as to what is the representative period of operation when determining emission increases and decreases. Williams proposed using the time period of July 1999 to June 2001. The Department believes that a more appropriate time period would be after July of 2000 to present.

The Department would like to offer the following emission information to support this timeframe:

- In July of 1999, the rolling 12-month SO₂ emissions from the SRU Incinerator was 22,198 pounds. In August of 2001, this value was 9,747 pounds. A review of the monthly emission rates shows that a significant reduction in SO₂ emissions for this unit occurred after July of 2000.
- In July of 1999, the rolling 12-month SO₂ emissions from the FCCU was 185,133 pounds. In August of 2001, this value was 93,774 pounds. A review of the monthly emission rates shows that a significant reduction in SO₂ emissions for this unit occurred after July of 2000.
- In July of 1999, the rolling 12-month SO₂ emissions from all refinery emission units was 113 tons. In August of 2001, this value was 66 tons. A review of the monthly emission rates shows that a significant reduction in SO₂ emissions occurred after July of 2000.

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- In July of 1999, the rolling 12-month NO_x emissions from the FCCU was 1,347,736 pounds. In August of 2001, this value was 349,869 pounds. A review of the monthly emission rates shows that a significant reduction in NO_x emissions occurred after April of 2000.
- In July of 1999, the rolling 12-month NO_x emissions from all refinery emission units was 1068 tons. In August of 2001, this value was 613 tons. A review of the monthly emission rates shows that a significant reduction in NO_x emissions occurred after April of 2000.

These examples are not all-inclusive.

As can be seen above, significant emission rate changes occurred in the spring/summer of 2000. The Department believes, therefore, that a more appropriate time period should be used that takes into account the emission rate changes that occurred in 2000.

If you have any questions, please write or contact me at (901) 544-7727.

Sincerely,



David A. Thorpe, Engineer
Pollution Control Section

cc: Dale Morris, Williams Refining & Marketing L.L.C.
Jim Little, USEPA Region IV
Katy Forney, USEPA Region IV
source file #0101
signature file

Attachment 2



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
81 FORSYTH STREET
ATLANTA, GEORGIA 30303-8980

4APT-APB

NOV 01 2001

Diane L. Arnst, Manager
Pollution Control Section
Memphis and Shelby County Health Department
814 Jefferson Avenue
Memphis, Tennessee 38105


Dear Ms. Arnst:

On October 15, 2001, we received from Trinity Consultants the prevention of significant deterioration (PSD) permit application for the Williams Refining & Marketing, L.L.C. (Williams) refinery located in Memphis, Tennessee. The PSD permit application is for the proposed modification to the existing refinery in order to expand capacity by approximately 25 percent and to comply with the Tier 2 motor vehicle emission standards and gasoline sulfur control requirements published by the U.S. Environmental Protection Agency (EPA) in February 2000. This modification is referred to as the Tier 2 Project. Williams proposes to add a gasoline sulfur removal unit, five refinery fuel gas-fired heaters, two storage tanks, and a cooling tower. Williams proposes to modify the existing fluidized catalytic cracking unit (FCCU) and to increase firing rates at several existing heaters. The current capacity of the Williams Refinery is approximately 165,000 barrels of petroleum crude processed per day. This capacity will increase approximately 25 percent as a result of the proposed modifications to roughly 200,000 barrels of petroleum crude processed per day. Based on emission estimates in the permit application, total net emissions increases from the proposed project are above the thresholds requiring PSD review for nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO₂), and particulate matter (PM/PM₁₀). Williams' PSD netting analysis resulted in net emissions increases of volatile organic compounds (VOC) being below the significant emission rate level of 40 tons per year that would require PSD review.

Based on our review of the Tier 2 Project permit application for the Williams Refinery, we have the following comments regarding the best available control technology (BACT) analysis and PSD applicability. Comments regarding the air quality impact assessment and any additional issues will be provided in a separate letter if necessary. Our comments take into account information obtained during a meeting with Williams in Memphis, TN on October 19, 2001.

1. It is our understanding that the netting analysis will be resubmitted by Williams using a 5- year contemporaneous period for all pollutants. We further understand that a representative time period other than two years may be used in the netting analysis to assess emission increases for emission units affected by the continuous catalytic reformer (CCR) installation in May 2000.
2. Appendix A of the Tier 2 Project permit application indicates there are no emissions from the CCR catalyst regenerator. It is our understanding that the regenerator burns off a

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small amount of coke from catalyst surfaces. Any emissions from the CCR regenerator should be included in the source's potential-to-emit and netting calculations.

3. The BACT analysis for process heaters concludes catalytic oxidation and thermal oxidation options for control of CO emissions can be rejected as BACT based on "negative environmental impacts." EPA's opinion is that negative environmental impact alone is not an adequate reason for rejecting these technologies as BACT for control of CO emissions.
4. The BACT emission limits proposed by Williams for several of the units undergoing PSD review are not representative of BACT emission limits for similar units elsewhere. Additionally, the Williams Refinery is currently achieving emission levels well below what is being proposed as BACT for many of the units undergoing PSD review, especially the FCCU. Although the main pollutant of concern in this regard is SO₂, emissions of NO_x, CO and PM₁₀ from the FCCU should also be re-evaluated. It is our understanding that Williams will re-propose BACT emission limits, and we will comment on this subject in more detail at that time.
5. Region 4 is consulting with EPA Headquarters regarding whether the Williams Refinery and West Memphis Terminal should be considered one source for the purposes of PSD permitting. A written opinion from EPA will be sent to the Memphis and Shelby County Health Department (MSCHD) for consideration. If it is decided that the Williams Refinery and the West Memphis Terminal are one source, Williams will need to re-evaluate the project's total emissions increases and include in the netting analysis any emission increases and decreases that have occurred at the West Memphis Terminal during the contemporaneous period.
6. In our opinion, startup and shutdown emissions count toward compliance with annual emissions limits for the source. The National Ambient Air Quality Standards (NAAQS) apply at all times, including periods when one or more emissions units are undergoing startup and shutdown. We recommend that Williams provide information on the typical frequency, duration, and nature (including potential emission rates) of startup and shutdown events so that MSCHD can evaluate the likelihood of adverse ambient impacts associated with such events.
7. The Tier 2 Project permit application is not clear on whether Williams will be seeking emissions caps similar to those granted in previous PSD permits. If Williams will be seeking emissions caps, the Tier 2 Project permit application should clearly identify the pollutants, emission units, and emission limits to be included in the caps.
8. If the emissions caps in the 1998 PSD permit are increased, there will need to be an evaluation to determine if BACT analyses are required for all emission units under the increased cap that do not have an individual BACT emission limit.
9. PM₁₀ emissions from the cooling towers were not evaluated and a BACT analysis was not performed for PM₁₀. These emissions should be included in the source's emissions increase and netting calculations. Additionally, we are evaluating the "controlled" AP-42

VOC emissions factor for cooling towers and will provide guidance on procedures that can be implemented to assure that use of this factor is appropriate.

10. The phrase "physically modified" is used in the Tier 2 Project permit application at various places. The definition of modification includes both "a change in the method of operation" as well as "physical modification." We request assurance that potential changes in the method of operation have been assessed in addition to physical changes.
11. It is our understanding that a construction schedule and additional details on the installations and modifications of the Tier 2 Project will be submitted by Williams. Additionally, it would aid in our review of the Tier 2 Project if Williams clarified which installations/modifications are being made in order to comply with the Tier 2 requirements and which installations/modifications are being made in order to increase production capacity at the refinery.
12. The BACT economic analyses for the Dynawave and Belco Wet Gas Scrubbers evaluated for PM₁₀ removal from the FCCU Regenerator were missing from Appendix C of the Tier 2 Project permit application. It is our understanding that Williams will provide these economic analyses to MSCHD.

Thank you for the opportunity to comment on the Williams Tier 2 Project permit application. If you have any questions regarding these comments, please direct them to either Katy Forney at 404-562-9130 or Jim Little at 404-562-9118.

Sincerely,



Kay T. Prince
Chief
Air Programs Branch
Air, Pesticides and Toxics
Management Division