

Bryan W. Shaw, Ph.D., *Chairman*
Buddy Garcia, *Commissioner*
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Mark R. Vickery, P.G., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 10, 2010

TO: Persons on the attached mailing list.

RE: CITGO Refining and Chemical Company, LP
Permit Nos. 9604A and PSD-TX-653M1

Decision of the Executive Director.

The executive director has made a decision that the above-referenced permit application meets the requirements of applicable law. **This decision does not authorize construction or operation of any proposed facilities.** This decision will be considered by the commissioners at a regularly scheduled public meeting before any action is taken on this application unless all requests for contested case hearing or reconsideration have been withdrawn before that meeting.

Enclosed with this letter is a copy of the Executive Director's Response to Comments. A copy of the complete application, draft permit and related documents, including public comments, is available for review at the TCEQ Central office. A copy of the complete application, the draft permit, and executive director's preliminary decision are available for viewing and copying at The TCEQ Central Office, the TCEQ Corpus Christi Regional Office, and at Downtown Main Library at 805 Comanche, Corpus Christi, Nueces County, Texas. The facility's compliance file, if any exists, is available for public review at the TCEQ Corpus Christi Regional Office, NRC Building, Suite 1200, 6300 Ocean Drive, Unit 5839, Corpus Christi, Texas.

If you disagree with the executive director's decision, and you believe you are an "affected person" as defined below, you may request a contested case hearing. In addition, anyone may request reconsideration of the executive director's decision. A brief description of the procedures for these two requests follows.

How To Request a Contested Case Hearing.

It is important that your request include all the information that supports your right to a contested case hearing. You must demonstrate that you meet the applicable legal requirements to have your hearing request granted. The commission's consideration of your request will be based on the information you provide.

The request must include the following:

- (1) Your name, address, daytime telephone number, and, if possible, a fax number.
- (2) If the request is made by a group or association, the request must identify:
 - (A) one person by name, address, daytime telephone number, and, if possible, the fax number, of the person who will be responsible for receiving all communications and documents for the group; and
 - (B) one or more members of the group that would otherwise have standing to request a hearing in their own right. The interests the group seeks to protect must relate to the organization's purpose. Neither the claim asserted nor the relief requested must require the participation of the individual members in the case.
- (3) The name of the applicant, the permit number and other numbers listed above so that your request may be processed properly.
- (4) A statement clearly expressing that you are requesting a contested case hearing. For example, the following statement would be sufficient: "I request a contested case hearing."

Your request must demonstrate that you are an **"affected person."** An affected person is one who has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application. Your request must describe how and why you would be adversely affected by the proposed facility or activity in a manner not common to the general public. For example, to the extent your request is based on these concerns, you should describe the likely impact on your health, safety, or uses of your property which may be adversely affected by the proposed facility or activities. To demonstrate that you have a personal justiciable interest, you must state, as specifically as you are able, your location and the distance between your location and the proposed facility or activities. A person who may be affected by emissions of air contaminants from the facility is entitled to request a contested case hearing.

Your request must raise disputed issues of fact that are relevant and material to the commission's decision on this application. The request must be based on issues that were raised during the comment period. The request cannot be based solely on issues raised in comments that have been withdrawn. The enclosed Response to Comments will allow you to determine the issues that were raised during the comment period and whether all comments raising an issue have been withdrawn. The public comments filed for this application are available for review and copying at the Chief Clerk's office at the address below.

To facilitate the commission's determination of the number and scope of issues to be referred to hearing, you should: 1) specify any of the executive director's responses to comments that you dispute; and 2) the factual basis of the dispute. In addition, you should list, to the extent possible, any disputed issues of law or policy.

How To Request Reconsideration of the Executive Director's Decision.

Unlike a request for a contested case hearing, anyone may request reconsideration of the executive director's decision. A request for reconsideration should contain your name, address, daytime phone number, and, if possible, your fax number. The request must state that you are requesting reconsideration of the executive director's decision, and must explain why you believe the decision should be reconsidered.

Deadline for Submitting Requests.

A request for a contested case hearing or reconsideration of the executive director's decision must be **received** by the Chief Clerk's office no later than **30 calendar days** after the date of this letter. You may submit your request electronically at <http://www.tceq.state.tx.us/about/comments.html> or by mail to the following address:

LaDonna Castañuela, Chief Clerk
TCEQ, MC-105
P.O. Box 13087
Austin, Texas 78711-3087

Processing of Requests.

Timely requests for a contested case hearing or for reconsideration of the executive director's decision will be referred to the alternative dispute resolution director and set on the agenda of one of the commission's regularly scheduled meetings. Additional instructions explaining these procedures will be sent to the attached mailing list when this meeting has been scheduled.

How to Obtain Additional Information.

If you have any questions or need additional information about the procedures described in this letter, please call the Office of Public Assistance, Toll Free, at 1-800-687-4040.

Sincerely,



LaDonna Castañuela
Chief Clerk

LDC/er

Enclosures

MAILING LIST
for
CITGO Refining and Chemical Company, LP
Permit Nos. 9604A and PSD-TX-653M1

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TCEQ AIR QUALITY PERMIT NO. 9604A
PSD AIR QUALITY PERMIT NO. PSD-TX-653M1

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CHIEF CLERKS OFFICE

APPLICATION BY	§	BEFORE THE
	§	
CITGO REFINING AND CHEMICAL COMPANY, LP	§	TEXAS COMMISSION ON
	§	
NUECES COUNTY, TEXAS	§	ENVIRONMENTAL QUALITY

EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENTS

The Executive Director of the Texas Commission on Environmental Quality ("the Commission" or "TCEQ") files this Response to Public Comments on the permit amendment application and Executive Director's preliminary decision. As required by Title 30 Texas Administrative Code (TAC) § 55.156, before an application is approved, the Executive Director shall prepare a response to all timely, relevant and material, or significant comments. The Office of Chief Clerk received comments from Citizens for Environmental Justice, Refinery Reform Campaign, and South Texas Colonias Initiative. The commenters also requested a contested case hearing. This Response addresses all public comments received, whether or not withdrawn. If you need more information about this permit application or the permitting process please call the TCEQ Office of Public Assistance at 1-800-687-4040. General information about the TCEQ can be found at our website at www.tceq.state.tx.us.

BACKGROUND

Description of Facility and Proposals

CITGO Refining and Chemical Company, LP (CITGO, Applicant) has applied to the TCEQ for a New Source Review Authorization under Texas Clean Air Act (TCAA) §382.0518. This will authorize the modification of an existing facility that may emit air contaminants.

This permit will authorize modification to the No. 2 Fluid Catalytic Cracking Unit (FCCU) at the applicant's East Plant by installation of additional air blowers, testing of the FCCU unit for 12 months at a higher throughput, and, if the test results are satisfactory, the authorization of the modified FCCU unit at higher throughput level after the test period. The facility is located at 1801 Nueces Bay Boulevard (the "East Plant"), at 7350 Interstate Highway 37, Corpus Christi, Nueces County, Texas. Contaminants authorized under this permit include nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), particulate matter, including particulate matter less than 10 microns (PM/PM₁₀), sulfur dioxide (SO₂), and sulfuric acid (H₂SO₄).

Procedural Background

Before work is begun on the modification of an existing facility that may emit air contaminants, the person planning the modification must obtain authorization from the commission. This permit application is for a permit amendment of Air Quality Permit Number 9604A/PSD-TX-653. The permit amendment application was received on June 13, 2007 and declared administratively complete on June 28, 2007. The Notice of Receipt and Intent to Obtain an Air Quality Permit amendment for this application was published on July 25, 2007, in the *Corpus Christi Caller Times*. Notice of Application and Preliminary Decision for an Air Quality Permit (NAPD) was published on November 3, 2009 in the *Corpus Christi Caller Times*. The comment period for this application was closed on December 3, 2009 and no comments were received for the second notice. Since this application was administratively complete after September 1, 1999, this action is subject to the procedural requirements adopted in accordance with House Bill 801, 76th Legislature, 1999.

COMMENTS AND RESPONSES

COMMENT 1:

The commenters state that the population near CITGO Refinery, also known as refinery row, is mostly people of color and low-income, and health studies indicate that Corpus Christi has higher rates of certain types of cancer and overall birth defects than the rest of the state.

The commenters cite the birth defects studies conducted by the Texas Department of State Health Services Epidemiology and Surveillance Branch (dated 7/06) which they state revealed that for the years 1996-2002, the Corpus Christi area had 84% higher rates of overall birth defects when compared to the rest of the registry and severe birth defects were 17% higher in Corpus Christi, when compared to the rest of the state.

The commenters also reference a report written by Citizens for Environmental Justice titled: "Corpus Christi, Texas: Criminal Injustice in an All American City" which they state revealed that race zoning restrictions applied decades ago, forcing people of color and low-income to live by hazardous sites, refineries and dumpsites. They further state that although the racial zoning was repealed, the communities along refinery row are still predominantly low-income and communities of color. They state that city, county and state of Texas have not corrected this problem. The commenters also indicate that this has been brought to the attention of the U.S. Department of Justice.

The commenters also cite a statistical analysis conducted by Public Citizen titled "Industrial Upset Pollution: Who Pays the Price?" which, according to the commenters, indicates that children of color and low-income are being adversely impacted by pollution, affecting school attendance rates, children's health, education and the economy.

RESPONSE 1:

Air quality permits are evaluated by the agency without reference to the socioeconomic or racial status of the surrounding community. The TCEQ has made a strong policy commitment to address environmental equity by creating an environmental equity program within the Office of Public Assistance. This program works to help citizens and neighborhood groups participate in the regulatory process and to make sure that citizens' concerns are considered thoroughly and are handled in a way that is equitable to all. The Office of Public Assistance can be reached at 1-800-687-4040 for further information.

Regarding the request for a contested case hearing, determinations concerning whether or not to grant the hearing request and affected party status will be considered by the commission, pursuant to TCEQ rules, at a commission meeting to be scheduled by the chief clerk. The chief clerk shall mail notice to the applicant, executive director, public interest counsel, and all timely commenters and requestors at least thirty-five days before the first meeting at which the commission considers requests.

COMMENT 2:

The commenters state that CITGO Refinery East Plant has been criminally convicted by a federal jury of violating the Clean Air Act by knowingly operating 2 tanks (116 and 117) without proper pollution control devices, resulting in the release of tons of uncontrolled benzene, a carcinogen, straight into the environment for over ten (10) years.

The commenters state that CITGO continued to operate illegally even after they were made aware by the TCEQ that the community was adversely being impacted. Commenters state that CITGO should not be granted a permit that would allow them to increase emissions, especially VOCs, on a community that has suffered tremendously at the hands of CITGO.

The commenters state that the fence-line community of Hillcrest, which includes Citizens for Environmental Justice members, have been directly impacted by these criminal acts and would be directly impacted by the issuance of this permit which would emit the contaminants: organic compounds, sulfur dioxide, carbon monoxide, nitrogen oxides, sulfuric acid mist, and particulate matter less than ten microns in diameter. They further state that if this permit is granted, it would result in an additional burden of 31.4 tpy VOC and 15.3 tpy of PM/PM₁₀ on the community.

RESPONSE 2:

CITGO has been operating the FCCU under the Air Quality Permit 9604A/PSD-TX-653 since the initial issuance. During the technical review, a compliance history review of the company and the site is conducted based on the criteria in 30 TAC Chapter 60. These rules may be found at the following website: <http://www.tceq.state.tx.us/rules/index.html>. The compliance history for the company and site is reviewed for the five-year period prior to the date the permit application was received by the Executive Director. The compliance history includes multimedia compliance-related components about the site under review. These components include the

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following: enforcement orders, consent decrees, court judgments, criminal convictions, chronic excessive emissions events, investigations, notices of violations, audits and violations disclosed under the Audit Act, environmental management systems, voluntary on-site compliance assessments, voluntary pollution reduction programs, and early compliance.

For this permit amendment the company and site have been rated and classified pursuant to 30 TAC Chapter 60. A company and site may have one of the following classifications and ratings:

High: rating < 0.10 (above-average compliance record);

Average by Default: rating = 3.01 (these are for sites which have not yet been investigated);

Average: 0.10 < rating < 45 (generally complies with environmental regulations);

Poor: 45 < rating (performs below average).

According to the TCEQ's records, this site has a rating of 3.24 and a classification of "Average." The company rating and classification, which is the average of the ratings for all sites the company owns, is 3.06, which is a rating of "Average." CITGO is not considered a repeat violator, and there are currently no criminal convictions listed in CITGO's compliance history. Despite the jury verdict referenced by the commenters, there is not an official conviction until a sentence has been imposed. As of this date, the judge has not yet sentenced CITGO in the referenced matter.

Furthermore, the permit application must meet allowable standards outlined in the Texas Clean Air Act and applicable state and federal rules and regulations, including 30 TAC §101.4, which prohibits nuisance conditions. The rule states, "No person shall discharge from any source whatsoever one or more air contaminants or combinations thereof, in such concentration and of such duration as are or may be injurious to or to adversely affect human health or welfare, animal life, vegetation, or property, or as to interfere with the normal use and employment of animal life, vegetation, or property."

The TCEQ Office of Compliance and Enforcement (OCE) is responsible for monitoring and enforcing compliance with the state's environmental laws. The OCE includes a Field Operations Division consisting of 16 regional offices located throughout the state with responsibility for: conducting investigations to evaluate compliance at the permitted and registered air facilities; and following guidance for developing enforcement action referrals for violations identified during investigations. The OCE also has an Enforcement Division that is responsible for developing enforcement actions involving violations of state environmental laws.

Individuals are encouraged to report any concerns about nuisance issues or suspected noncompliance with terms of any permit or other environmental regulation by contacting the TCEQ Corpus Christi Regional Office at 361-825-3100, or by calling the 24-hour toll-free Environmental Complaints Hotline at 1-888-777-3186. If the facility is found to be out of compliance with the terms and conditions of the permit, it will be subject to possible enforcement action. Citizen-collected evidence may be used in such an action. See 30 TAC §

70.4, Enforcement Action Using Information Provided by Private Individual, for details on gathering and reporting such evidence. The TCEQ has long had procedures in place for accepting environmental complaints from the general public but now has a new tool for bringing potential environmental problems to light. Under the citizen-collected evidence program, individuals can provide information on possible violations of environmental law and the information can be used by the TCEQ to pursue enforcement. In this program, citizens can become involved and may eventually testify at a hearing or trial concerning the violation. For additional information, see the TCEQ publication, "Do You Want to Report an Environmental Problem? Do You Have Information or Evidence?" This booklet is available in English and Spanish from the TCEQ Publications office at 512-239-0028, and may be downloaded from the agency website at www.tceq.state.tx.us (under Publications, search for document no. 278).

Potential impacts to human health and welfare or the environment are determined by comparing air dispersion modeling predicted emission concentrations from the proposed facility to appropriate state and federal standards and effects screening levels. The specific health-based standards or guidance levels employed in evaluating the potential emissions include the National Ambient Air Quality Standards (NAAQS); TCEQ standards contained in 30 TAC Chapters 111, 112, and 116; TCEQ Effects Screening Levels (ESLs);¹ and BACT driven emission limits obtained from the EPA's RACT/BACT/LAER clearinghouse. When compared to standards, the modeling impacts of all pollutant increases in this project were acceptable. CITGO is on the Air Pollutant Watch list for benzene; therefore, no allowable benzene increase is permitted from this project.

The NAAQS, as defined in Title 40 of the Code of Federal Regulations (CFR) § 50.2, were created and are periodically reviewed by the EPA. The NAAQS include both primary and secondary standards. The primary standards are those which the Administrator of the EPA determines are necessary, with an adequate margin of safety, to protect the public health, including sensitive members of the population such as children, the elderly, and individuals with existing lung or cardiovascular conditions.² Secondary NAAQS are those which the Administrator determines are necessary to protect the public welfare and the environment, including animals, crops, vegetation, and buildings, from any known or anticipated adverse effects associated with the presence of an air contaminant in the ambient air.³ The standards are set for criteria pollutants: ozone, lead, carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen

¹ To view the ESL list or obtain more information on ESLs, visit the TCEQ website at http://www.tceq.state.tx.us/implementation/tox/esl/list_main.html.

² EPA considered animal studies indicating allergic responses to particulate matter as well as studies in children indicating increased allergic responses to traffic-related gases and particles when they established the most recent NAAQS. Therefore, emissions below the applicable NAAQS would not be expected to exacerbate allergic conditions.

³ Section 302(h) of the Federal Clean Air Act (FCAA), 42 U.S.C. § 7602, defines effects on welfare to include effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility and climate, damage to and deterioration of property, hazards to transportation, and impacts to personal comfort and well-being, whether caused by transformation, conversion, or combination with other air pollutants.

dioxide (NO₂), and respirable particulate matter (PM), which includes PM₁₀ and PM_{2.5}. "Criteria pollutants" are those pollutants for which a NAAQS has been established.

Because the emissions from this facility should not cause an exceedance of the NAAQS, air emissions from this facility are not expected to adversely impact land, livestock, crops, or visibility, nor should emissions interfere with the use and enjoyment of surrounding land or water. The Texas Clean Air Act does not give the TCEQ authority to regulate air emissions beyond the direct impacts (inhalation) that the air emissions have to human health or welfare. Therefore, the TCEQ does not set emission limits on the basis that emissions may have impacts (by themselves or in combination with other contaminants or pathways) after being deposited on land or water or incorporated into the food chain.

This project triggered PSD review for carbon monoxide (CO), particulate matter (PM), and sulfuric acid mist. Therefore, CITGO performed a full PSD review for these pollutants, which resulted in the BACT analysis discussed below. CITGO also performed modeling for the emission increases.

Furthermore, in the permit evaluation process, the permit reviewer identified all sources of air contaminants at the proposed facility and assured that the facility will be using the Best Available Control Technology (BACT). Pursuant to TCAA § 382.0518, BACT is based upon control measures that are designed to minimize the level of emissions from specific sources with consideration given to technical practicability and economic reasonableness. CITGO has represented in the permit application that BACT will be used at the proposed site. Use of appropriate control measures will decrease the amount of air contaminants emitted into the atmosphere by this facility. The contaminants at this facility are NO_x, CO, VOCs, SO₂, PM, and H₂SO₄. The primary control measures applied to this facility are: the use of low sulfur fuel for lower sulfur emissions; deSO_x catalysts in the FCCU Regenerator to achieve further SO₂ reductions; and an Electrostatic Precipitator to reduce reductions of SO₂ and PM/PM₁₀ from the stack gases after they leave the FCCU Regenerator. Following is a more detailed BACT discussion for the affected sources:

FCCU Regenerator/ESP Stack (EPN 31-PR-1):

The proposed emission limits, control methods and monitoring methods for the No.2 FCCU are outlined below for each criteria pollutant:

Sulfur Dioxide (SO₂):

As described in Special Condition 4 of the draft permit, during the one-year FCCU Optimization period, CITGO proposes 300 ppmvd (1-hour average, corrected to 0% excess oxygen) and 50 ppmvd (1-month and annual rolling average, corrected to 0% excess oxygen) as the BACT limit. During this one-year period, CITGO will utilize the emission control technologies of feed desulfurization and SO_x reducing catalysts. After the one-year optimization period (post-modification period), CITGO proposes to achieve an SO₂ emission limit of 25 ppmvd (12-month

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rolling average, corrected to 0% excess oxygen) and an SO₂ emission limit of 50 ppmvd (7-day rolling average, corrected to 0% excess oxygen) using their existing upgraded ESP, low sulfur feed, and de-SO_x catalyst additives. As shown in the following table, CITGO's proposals for the post optimization period match the emission rates achieved by the other refineries found in the EPA's RACT/BACT/LAER (RBL) database that use low sulfur feed or SO_x reducing catalyst additives.

Company	Refinery Name & Location	Permit No.	Date Issued	Control Used	ppmvd SO ₂	Average Time
Chevron	El Segundo (CA)	454221	3/30/2007	Low Sulfur feed	25 50	annual 7-day
ExxonMobile	Torrance (CA)	458743	3/23/2007	Low Sulfur feed	25 50	annual 7-day
ConocoPhillips	Billings (MT)	2619-22	3/22/2007	SO _x -Reducing Catalyst	25 50	annual 7-day
Flint Hills	Pine Bend (OK)	03700011-001	10/31/2005	SO _x -Reducing Catalyst	25 50	annual 7-day

Particulate Matter (PM/PM₁₀):

As described in Special Condition 8 of the draft permit, CITGO proposes a non-sulfate, front half particulate matter emission limit for the FCCU Regenerator/ESP Stack of 1 lb/1000 lbs of coke burn which is the NSPS Subpart J limit. This is equivalent to 2 lbs total PM/1000 lbs of coke burn. TCEQ BACT is 1 lb total PM/1000 lbs of coke burn. As shown in the table below, PM limits are not available for the refineries found on the RBL that use low sulfur feed and/or SO_x reducing catalyst additives. However, some of the refineries found on the RBL permit database meet the TCEQ BACT using the wet gas scrubbers.

Company	Refinery Name & Location	Permit No.	Date Issued	Control Used	PM Limit (lb/1000-lb coke burn)
Chevron	El Segundo (CA)	454221	3/30/2007	Not available	Not specified
ExxonMobile	Torrance (CA)	458743	3/23/2007	" "	" "
ConocoPhillips	Billings (MT)	2619-22	3/22/2007	" "	" "
Flint Hills	Pine Bend (OK)	03700011-001	10/31/2005	" "	" "
Valero	ThreeRivers(TX)	50607/PSDTX331M1	4/5/2007	WetGas Scrubber	1
Valero	Texas City (TX)	39142/PSDTX822M2	4/3/2007	Wet GasScrubber	1
Valero	St. Charles (LA)	PSD-LA-619/2520-00027-V4	2/8/2007	WetGasScrubber	1
Flint Hills	CorpusChristiEast(TX)	6308/PSDTX137M2	10/31/2006	WetGasScrubber	1
ConocoPhillips	PoncaCity(OK)	2003-336-C	2/9/2007	WetGasScrubber	Not specified
Sunoco	Toledo (OH)	04-01447	9/29/2006	WetGasScrubber	0.9
ExxonMobile	Beaumont	46534/PSDTX992	6/2/2006	WetGasScrubber	1

CITGO performed a Tier-3 cost analysis and demonstrated that it is not cost effective to meet the TCEQ BACT for total PM of 1 lb/1000 lb coke burn, using their existing electrostatic precipitator (ESP). CITGO asserts that it operates an upgraded ESP, not a wet gas scrubber and it does not have operating experience to commit to the BACT limit of 1 lb total PM/1000 lb coke burn with the ESP control at the proposed higher throughput rate. CITGO also asserts that the performance of the system at the increased throughput rate can not be evaluated until authorization for the throughput increase is approved. Upon modification, CITGO proposes to monitor the PM from the ESP stack and commit to the BACT limit within four years unless CITGO submits PM testing results and an accompanying proposal demonstrating the need for a higher PM limit. If CITGO makes such a proposal, it will be subject to TCEQ review. CITGO expects that the use of SO_x reduction catalysts to minimize SO₂ emissions will also minimize emissions of sulfuric acid mist, a back-half condensable component of PM.

Sulfuric Acid (H₂SO₄) Mist:

CITGO performed a Tier-3 cost analysis and demonstrated that it is not cost effective to meet the TCEQ BACT for acid mist using their existing ESP.

As described in Special Condition 8 of the draft permit, CITGO proposes a total acid mist emission rate from the FCCU Regenerator/ESP Stack of 1 lb/1000 lbs of coke burn. CITGO asserts that the performance of the system for acid mist emissions at the increased throughput rate can not be evaluated until authorization for the increase is approved. Upon modification, CITGO proposes to monitor the acid mist from the ESP stack and commit to a limit of 0.5 lb acid mist/1000 lbs coke burn within four years unless CITGO submits acid mist testing results and an accompanying proposal demonstrating the need for a higher acid mist limit. If CITGO makes such a proposal, it will be subject to TCEQ review. CITGO expects that the use of SO_x reduction catalyst to minimize SO₂ emissions will also minimize emissions of sulfuric acid mist, which is the back-half condensable component of PM.

As shown in the following table, acid mist limits were not specified for the refineries found on the RBLC that use low sulfur feed or SO_x reducing catalyst additives. Acid mist limits for refineries that use wet gas scrubbers were also not specified for most of the refineries except the two listed. CITGO does not operate with a wet gas scrubber, it operates with an ESP; therefore the limits specified for wet gas scrubber will not be applicable to their FCCU Unit.

Company	Refinery Name & Location	Permit No.	Date Issued	Control Used	AcidMist Limit
Chevron	El Segundo (CA)	454221	3/30/2007	LowSulfur feed	Not specified
ExxonMobile	Torrance (CA)	458743	3/23/2007	LowSulfur Feed	“ “
ConocoPhillips	Billings (MT)	2619-22	3/22/2007	SOx-reducing catalyst	“ “
Flint Hills	Pine Bend (OK)	03700011-001	10/31/2005	SOx-reducing catalyst	“ “

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Valero	ThreeRivers	50607/PSDTX331M1	4/5/2007	WetGasScrubber	13.69 lb/hr 59.96 tpy (*)
ConocoPhillips	PoncaCity(OK)	2003-336-C	2/9/2007	WetGasScrubber	Not specified
Valero	St. Charles (LA)	PSD-LA-619/2520-00027-V4	2/8/2007	WetGasScrubber	“ “
Flint Hills	CorpusChristiEast (TX)	6308/PSDTX137M2	10/31/2006	WetGasScrubber	“ “
Sunoco	Toledo(OH)	04-01447	9/29/2006	WetGasScrubber	10ppmvd(*)
ExxonMobile	Beaumont (TX)	46534/PSDTX992	6/2/2006	WetGasScrubber	41.7 lb/hr 181.5 tpy(*)
ConocoPhillips	Ferndale (WA)	OAC773C	7/29/2005	WetGasScrubber	Not specified

*Information in RBLC and/or permits not sufficient to convert acid mist emission rates to unit of lb/1000 lb coke burn.

Nitrogen Oxides (NO_x):

As described in Special Condition 7 of the draft permit, NO_x emissions from the FCCU Regenerator/ESP stack will meet the TCEQ BACT limit of 20 ppmvd (365-day rolling average, corrected to 0% excess oxygen) and 40 ppmvd (7-day rolling average, corrected to 0% excess oxygen). As shown in the following table, the proposed NO_x limits either match or are below the NO_x emission limits for the refineries on the RBLC permit database.

Company	Refinery Name & Location	Permit No.	Date Issued	Control Used	NO _x Limit (ppmvd)
Chevron	El Segundo (CA)	454221	3/30/2007	Not specified	Not specified
ExxonMobile	Torrance (CA)	458743	3/23/2007	SelectiveCatalytic Reduction	20 (annual) 40 (7-day)
ConocoPhillips	Billings (MT)	2619-22	3/22/2007	Not specified	Not specified
Flint Hills	Pine Bend (OK)	03700011-001	10/31/2005	Not specified	Not specified
Valero	ThreeRivers	50607/PSDTX331M1	4/5/2007	Not specified	200
ConocoPhillips	PoncaCity(OK)	2003-336-C	2/9/2007	Not specified	Not specified
Valero	St. Charles (LA)	PSD-LA-619/2520-00027-V4	2/8/2007	Not specified	20 (annual)
Flint Hills	CorpusChristiEast (TX)	6308/PSDTX137M2	10/31/2006	Not specified	200
Sunoco	Toledo(OH)	04-01447	9/29/2006	SelectiveCatalytic Reduction	20 (annual) 40 (7-day)
ExxonMobile	Beaumont (TX)	46534/PSDTX992	6/2/2006	Not specified	200 (annual) 408 (hourly)
ConocoPhillips	Ferndale (WA)	OAC773C	7/29/2005	Not specified	Not specified

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Valero	TexasCity(TX)	39142/PSDTX822M2	4/3/2007	Not specified	20 (annual) 40 (7-day)
Marathon Petroleum	Garryville (LA)	PSD-LA-719	12/27/2006	Catalyst additives	40

Carbon Monoxide (CO):

As described in Special Condition 6 of the draft permit, CITGO proposes a CO emission limit of 100 ppmv (365-day rolling average, corrected to 0% excess oxygen) and 500 ppmvd (hourly average, corrected to 0% excess oxygen). These proposed limits meet the TCEQ BACT and comparable to the CO limits on the RBLC database as shown in the following table.

Company	Refinery Name & Location	Permit No.	Date Issued	Control Used	CO Limit (ppmvd)
Chevron	El Segundo (CA)	454221	3/30/2007	Not specified	Not specified
ExxonMobile	Torrance (CA)	458743	3/23/2007	Not specified	Not specified
ConocoPhillips	Billings (MT)	2619-22	3/22/2007	Not specified	Not specified
Flint Hills	Pine Bend (OK)	03700011-001	10/31/2005	Not specified	Not specified
Valero	ThreeRivers	50607/PSDTX331M1	4/5/2007	Not specified	500
ConocoPhillips	PoncaCity(OK)	2003-336-C	2/9/2007	Not specified	Not specified
Valero	St. Charles (LA)	PSD-LA-619/2520-00027-V4	2/8/2007	Fullburn and good combustion	250 mg/Nm3(*)
Flint Hills	CorpusChristiEast (TX)	6308/PSDTX137M2	10/31/2006	Fullburn and good combustion	125 (annual) 500 (hourly)
Sunoco	Toledo(OH)	04-01447	9/29/2006	Vent gas to Boiler	180 (annual) 500 (hourly)
ExxonMobile	Beaumont (TX)	46534/PSDTX992	6/2/2006	Not specified	500 (hourly)
ConocoPhillips	Ferndale (WA)	OAC773C	7/29/2005	Not specified	Not specified
Valero	TexasCity(TX)	39142/PSDTX822M2	4/3/2007	Not specified	500 (averaging time not specified)
Marathon Petroleum	Garryville (LA)	PSD-LA-719	12/27/2006	Full burn and good combustion	Not specified

*Information in RBLC and/or permit not sufficient to convert CO emission rate to unit of ppmvd.

Volatile Organic Compounds (VOC):

The allowable VOC emission increase from the FCCU Regenerator will be a result of the combustion of coke that accumulates on the catalyst during the coke burn cycle. CITGO

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proposes a VOC limit of 10 ppmvd on both hourly and annual basis which meets the TCEQ BACT. As shown from the table below, the proposed VOC limit matches the VOC emission limit for the refineries on the RBLC permit database for which a VOC limit is specified.

Company	Refinery Name & Location	Permit No.	Date Issued	Control Used	VOC Limit (ppmvd)
Chevron	El Segundo (CA)	454221	3/30/2007	Not specified	Not specified
ExxonMobile	Torrance (CA)	458743	3/23/2007	Not specified	Not specified
ConocoPhillips	Billings (MT)	2619-22	3/22/2007	Not specified	Not specified
Flint Hills	Pine Bend (OK)	03700011-001	10/31/2005	Not specified	Not specified
Valero	ThreeRivers	50607/PSDTX331M1	4/5/2007	Not specified	10
ConocoPhillips	PoncaCity(OK)	2003-336-C	2/9/2007	Not specified	Not specified
Valero	St. Charles (LA)	PSD-LA-619/2520-00027-V4	2/8/2007	Fullburn and good combustion	Not specified
Flint Hills	CorpusChristiEast (TX)	6308/PSDTX137M2	10/31/2006	Fullburn and good combustion	10
Sunoco	Toledo(OH)	04-01447	9/29/2006	Vent gas to Boiler	Not specified
ExxonMobile	Beaumont (TX)	46534/PSDTX992	6/2/2006	Not specified	12.17 lb/hr 53.3 tpy (*)
ConocoPhillips	Ferndale (WA)	OAC773C	7/29/2005	Not specified	Not specified
Valero	TexasCity(TX)	39142/PSDTX822M2	4/3/2007	Not specified	10
Marathon Petroleum	Garryville (LA)	PSD-LA-719	12/27/2006	Full burn and good combustion	Not specified

*Information in RBLC and/or permit not sufficient to convert CO emission rate to unit of ppmvd.

Affected Tanks:

The increase in throughput at the No.2 FCCU will result in increased feed and product tank throughput. Although actual VOC emissions will increase due to additional throughput of storage tanks upstream and downstream of the FCCU, the resulting tank throughputs and emissions will be within the allowable levels authorized by the current permits. Therefore, a control technology review is not needed for affected tanks. Pending permit application No.80693 for the East Plant will consolidate all of the East Plant tanks into one permit. The project

emission increase due to these affected tanks is included in the PSD review applicability analysis for this project.

Cooling Tower (EPN F297):

There will be 2,000 gallons per minute (gpm) additional cooling water needed to cool the fractionation column associated with FCCU No. 2 expansion. This cooling tower is currently covered by Permit No. 2697A although not individually listed in that permit's MAERT. In order to meet this 2000 gpm additional demand, a new cooling tower cell will be added through an unregistered PBR pursuant to 30 TAC 106.371. CITGO will incorporate this PBR into Permit 2697A at the next renewal or amendment. The emission increase due to adding 2,000 gpm additional capacity at this affected source is included in the PSD review applicability analysis for this project.

Spent Catalyst Handling (EPN F343):

Spent catalyst is loaded onto trucks approximately once per week and there are very small PM emissions from this loading which have not been previously quantified in the permit. CITGO proposes to minimize these emissions through use of a "sock" placed over the discharge vent of the truck during catalyst loading activities. PM emissions associated with loading spent FCCU catalyst is calculated based on the emission factors in AP-42, Chapter 13.2.4.2.

If the 12-month test results for this project are satisfactory, the No. 2 FCCU expansion authorized by this permit will be permanent and the amendment will result in the following ton per year (tpy) reductions and increases in emissions:

NO _x	Decrease of 12.2 tpy
SO ₂	Decrease of 1056.6 tpy
H ₂ SO ₄	Decrease of 24.7 tpy
VOC	Increase of 31.4 tpy
PM/PM ₁₀	Increase of 15.3 tpy

There is no change proposed for CO emissions in this amendment. If the modifications in this amendment become permanent, as seen from these totals, there will be a moderate increase of VOC and PM; however, there will be a substantial decrease of SO₂ and moderate decreases of NO_x and H₂SO₄ as a result of this project.

In summary, based on potential concentrations reviewed by the Executive Director's staff, it is not expected there will be adverse health effects in the general public, sensitive subgroups, or animal life as a result of exposure to the expected levels of emissions from this site.

COMMENT 3:

The commenters state that the preliminary soil sample study in the Hillcrest community showed elevated polycyclic aromatic hydrocarbons (PAH) levels that were six to ten times the EPA's

residential soil limit. They state that house dust samples collected in Hillcrest were comparable to dust samples collected at the former Soviet Union.

RESPONSE 3:

This amendment triggered a PSD review. Therefore, CITGO performed PSD modeling for CO, PM, and sulfuric acid mist. CITGO also performed additional impacts analysis on future growth, the soils, vegetation, and visibility. Additional impacts analysis indicate that there will be no significant impact expected on soils surrounding the plant site.

Changes Made In Response to Comment

The Executive Director did not make any changes to the provisions of the draft permit in response to public comments.

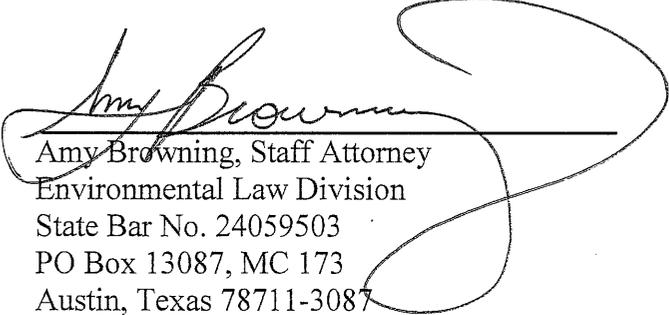
Respectfully submitted,

Texas Commission on Environmental Quality

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