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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

June 20, 2017

MEMORANDUM: EPA Region 9's Review of Tesoro's PSD Applicability Analysis
Regarding the LARIC Project

FROM: La Weeda Ward 

TO: File

This memorandum describes EPA Region 9's review of information provided by Tesoro Refining & Marketing Company LLC (Tesoro) to support Tesoro's conclusion that its proposed Los Angeles Refinery Integration and Compliance project (LARIC Project), described in greater detail below, does not trigger permitting requirements under the Prevention of Significant Deterioration (PSD) permitting program. Tesoro has requested that EPA Region 9 concur in its non-applicability determination. EPA's conclusion, after the review detailed below, is described in Section V below and in a letter to June Christman, Environmental Staff Engineer, Tesoro Refining & Marketing Company LLC from Elizabeth Adams, Acting Director, Air Division, EPA Region 9, dated June 20, 2017. This memorandum provides additional support for EPA Region 9's statements in that letter.

I. Background

In June 2013, Tesoro purchased the BP West Coast Products LLC Carson Refinery (currently termed the Tesoro Carson Operations) with the intention of integrating that refinery with the adjacent Tesoro Wilmington Operations to form the Tesoro Los Angeles Refinery (Los Angeles Refinery). The LARIC Project consists of modifications to physically connect the two refineries, shut down certain existing units, install new units and increase utilization of other existing units. Both of the current refineries and the future Los Angeles Refinery are in the South Coast Air Basin and in the jurisdiction of the South Coast Air Quality Management District (District).

The District has partial delegation of the Clean Air Act's Prevention of Significant Deterioration (PSD) program, set forth at 40 CFR 52.21, but is not delegated with the authority to issue permits that utilize the New Source Review (NSR) reform calculations that were made part of the PSD program in 2002. *See* 67 Fed. Reg. 80186 (Dec. 31, 2002). In particular, EPA Region 9 retains the authority to issue PSD permits and make applicability determinations for modified sources that involve calculations utilizing NSR reform methodologies for PSD applicability purposes.¹

¹ The background for this partial delegation of PSD authority to the District is set forth in the document entitled *U.S. EPA – South Coast Air Quality Management District Agreement for Partial Delegation of Authority to Issue and Modify Prevention of*

II. Chronology

March 2015: Tesoro submits a draft PSD applicability analysis regarding the LARIC project (PSD Applicability Analysis) to the District, which was placed in an appendix to Tesoro's title V permit application. EPA Region 9 was not notified at this time of the existence of either the LARIC Project or Tesoro's title V applications to the District.

June 9, 2015: Tesoro made initial contact with EPA Region 9 to request a meeting to discuss the PSD Applicability Analysis Tesoro had prepared.

June 30, 2015: Tesoro visited EPA Region 9 in San Francisco to request a review and concurrence with the PSD Applicability Analysis Tesoro prepared that utilized NSR reform methodologies.² Tesoro presented an outline of its PSD Applicability Analysis via PowerPoint slides.

Attendees on behalf of Tesoro: June Christman, John Shao, Chris Drechsel and Alan Yaslik (Tesoro), Frances Keeler (Clyde & Co), and Bart Leininger and Mike Waller (Ashworth Leininger Group).

Attendees from EPA Region 9: Kerry Drake, Gerardo Rios, Ann Lyons, Laura Yannayon, Lisa Beckham, Roberto Gutierrez, and La Weeda Ward (via conference call).

July 1, 2015: EPA Region 9 receives initial PSD Applicability Analysis from Tesoro, dated June 18, 2015.

July 8, 2015: Tesoro responded to questions raised during and after the June 30th meeting and confirmed the following: 1) Both Tesoro's Carson Operations and Wilmington Operations operate under separate consent decrees (CDs) between the United States and previous owners of these facilities (see Appendix A, #6), but all emission control requirements of these CDs were met prior to the baseline years with respect to equipment included in the LARIC Project PSD Applicability Analysis; 2) none of the emissions units involved in the LARIC project are subject to additional standards during and after the baseline years. EPA Region 9 additionally questioned the contemporaneous period used in the PSD Applicability Analysis and requested a spreadsheet for the emissions analysis including emission factors and inputs. Tesoro stated during this correspondence that it was working on preparing the spreadsheet and a revision to the contemporaneous period used in the PSD Applicability Analysis and anticipated submitting them by July 17, 2015.

July 23, 2015: Tesoro submitted a revised PSD Applicability Analysis and supporting calculations with parts of the analysis marked confidential.

Significant Deterioration Permits Subject to 40 CFR 52.21. This delegation agreement was signed by representatives of EPA Region 9 and the District on July 25, 2007.

² Under the federal PSD regulations, sources are not required to obtain EPA approval of their preconstruction conclusions that PSD does not apply to a project. However, Tesoro chose to request that EPA Region 9 review and concur in its PSD applicability analysis.

July 23 - August 21, 2015: EPA Region 9 conducted its initial review and raised questions regarding monthly sulfuric acid mist emissions from the Carson Cogeneration unit that appear inconsistent from one baseline year to another. *Note: This issue is no longer relevant because Tesoro now bases emissions from the unit in question on maximum firing rate achieved during the baseline period and not monthly emissions.*

September 22, 2015: Tesoro submitted a revised PSD Applicability Analysis.

October 2, 2015: EPA Region 9 again noticed certain fields in Tesoro's supporting data for the PSD Applicability Analysis were marked confidential and advised Tesoro that if they wished to hold all or part of the submittal as confidential, they must follow the procedures in 40 CFR 2.204(e).

October 16, 2015: Tesoro submitted a revised PSD Applicability Analysis and supporting calculations noting that 1) criteria pollutant emission calculations for heaters H-100 and 51 Vac were updated based on SCAQMD-imposed permitting requirements; and 2) NO_x emissions estimates for new and modified heaters were updated to more conservatively account for emissions resulting from startup, shutdown and commissioning operations.

November 20, 2015: Tesoro submitted a claim of confidential business information (CBI), pursuant to 40 CFR 2.204(e), concerning parts of all previous submittals. Some subsequent submittals were marked as containing CBI. Tesoro did not substantiate its CBI claim in this and subsequent submittals.

December 9, 2015: EPA Region 9 provided comments to Tesoro concerning the October 16, 2015 PSD Applicability Analysis.

January 8, 2016: In response to EPA's December 9, 2015 comments, Tesoro submitted revised calculations noting the following revisions: 1) Calculation of emissions that the fluid catalytic cracking unit (FCCU) Regenerator, FCCU Pre-Heater and Cogeneration system could have accommodated during the selected baseline emissions periods. These are now based on the maximum achieved monthly firing rate rather than monthly emissions; and 2) updated projected actual emissions from the Carson Operations FCCU Regenerator, FCCU Pre-Heater and Cogenerations System utilizing emissions based on actual emissions rates and source testing and other engineering estimates, as reported during the baseline period.

March 16, 2016: Tesoro submitted a revised PSD Applicability Analysis.

April 4, 2016: EPA Region 9 informed Tesoro that it will need to provide a netting analysis demonstrating that all the emissions increases and decreases that are projected to occur within the contemporaneous period are otherwise creditable, as described in 40 CFR 52.21(b)(3).

April 15, 2016: Tesoro provided EPA Region 9 with information requested on April 4, 2016.

April 21, 2016: EPA Region 9 informed Tesoro that not all the emissions excluded in the PSD Applicability Analysis may legitimately be excluded because it is not clear that all the projected emissions increases are unrelated to the LARIC project.

April 22 – June 22, 2016: Series of communications between EPA Region 9 and Tesoro regarding emissions from the Carson FCCU that Tesoro claimed were excludable.

June 23, 2016: Tesoro submitted revised calculations that no longer relied on the subtraction of the previously claimed excludable emissions from the Carson FCCU emissions increase in its PSD Applicability Analysis.

June 24- November 20, 2016: Series of communications between EPA Region 9 and Tesoro regarding calculation details and assumptions employed in the PSD Applicability Analysis.

September 21, 2016: Tesoro submitted responses to a list of questions posed by EPA Region 9 on August 30, 2016 in emails dated September 21, 2016.

October 24, 2016: Tesoro submitted a revised PSD Applicability Analysis intended to address EPA Region 9's concerns.

November 16, 2016: Tesoro submitted its ERC application to the District for the Wilmington CO Boiler.

December 21, 2016: EPA Region 9 sent Tesoro a letter requesting that it substantiate its claims Confidential Business Information (CBI), pursuant to 40 CFR Part 2, for all documents provided to EPA Region 9 associated with the PSD Applicability Analysis.

January 18, 2017: EPA Region 9 received a letter from Tesoro withdrawing its claims of CBI for all previous submittals associated with the PSD Applicability Analysis.

March 7, 2017: Tesoro submitted its updated and revised PSD Applicability Analysis, entitled "Prevention of Significant Deterioration (PSD) Applicability Evaluation - Integration and Compliance Project," March 2017 (March 2017 PSD Applicability Evaluation) and revised supporting calculations. Together, these documents are referred to as the "March 7, 2017 Submittal" in this document.

May 8-19, 2017: Tesoro submitted additional requested information.

June 14-15, 2017: Tesoro submitted supplemental information and revised calculations that make minor adjustments to its March 2017 PSD Applicability Evaluation. For purposes of EPA Region 9's review, these minor amendments are treated as being incorporated into the March 2017 PSD Applicability Evaluation. These changes adjust the baseline years for the Carson Cogeneration unit to remain consistent across pollutants and to reflect normal business operations pursuant to 40 CFR 52.21 (b)(48).

III. Tesoro LARIC Project Description

Tesoro's LARIC Project includes a collection of changes that will be implemented during the

same *contemporaneous*³ period of construction at the refinery. Tesoro describes these changes on pages 5 through 15 of its March 2017 PSD Applicability Evaluation. These changes are intended to improve efficiency and flexibility at the integrated refinery, as well as produce gasoline that complies with federal Tier 3 gasoline requirements. As it pertains to PSD applicability, Tesoro’s project can be described conceptually as shown in Figure 1 below.

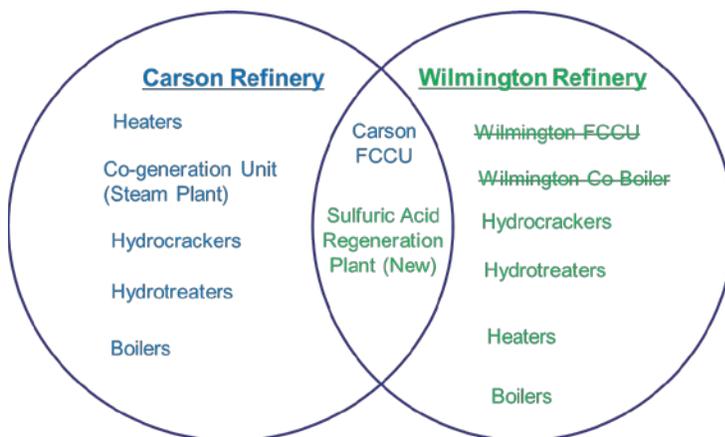


Figure 1. Tesoro LARIC Project Description

As shown in Figure 1, two units will be shut down on the Wilmington side: The Fluid Catalytic Cracking Unit (FCCU) and the CO Boiler, which is already shut down. The integrated refinery will share one FCCU and will add a new Sulfuric Acid Regeneration Plant.⁴

Tesoro did not use NSR reform methodologies for all *existing emissions units* (as defined in 40 CFR 52.21 (b)(7)(ii)). Specifically, Tesoro elected to use potential-to-emit in determining the projected emissions increases for those existing emissions units that will realize a physical change or change in the method of operation, consistent with 40 CFR 52.21 (b)(41)(ii)(d) (see page 17 and Attachments D and K of Tesoro’s March 2017 submittal). Tesoro uses and defines the following terms (on pages 5-6 of the March 2017 PSD Applicability Evaluation) as they pertain to the LARIC Project:

- ***New Unit:*** A new process or emissions unit that will be constructed at the refinery as part of the Project.
- ***Modified Unit:*** An existing process or emissions unit at the refinery that will realize a physical change or change in the method of operation as part of the Project.

³ As used here, the term *contemporaneous* has the same meaning as in 40 CFR 52.21 (b)(3)(ii).

⁴ This analysis only looks at PSD pollutants. There are several new storage tanks and other miscellaneous equipment changes that emit Volatile Organic Compounds (VOCs) (which are a precursor to ozone, for which the area is designated as nonattainment) but no PSD pollutants, and are therefore not considered in this PSD evaluation.

- *Affected Unit*: An existing process or emissions unit at the refinery that will not be modified but may experience an increase in utilization as a result of the Project.

IV. EPA Region 9 Review of Tesoro's March 7, 2017 Submittal

EPA Region 9 reviewed Tesoro's March 2017 PSD Applicability Evaluation and the supporting calculations submitted March 7, 2017 with references to the federal PSD program regulations in 40 CFR 52.21 for performing a PSD applicability analysis. Tesoro's March 2017 PSD Applicability Evaluation and supporting documents are based upon those same regulatory provisions and procedures.

Part C of title I of the Clean Air Act, and EPA's implementing regulations, contain the requirements of the PSD program. *See generally* 42 U.S.C. 7470 – 7479; 40 CFR 52.21. The primary element of this program is a preconstruction review and permitting requirement that applies to new major stationary sources or major modifications to existing major stationary sources locating in areas that are designated as attainment or unclassifiable for the National Ambient Air Quality Standards (NAAQS). *See* 42 USC 7475, 7479(1) and (2)(C); 42 CFR 52.21(a)(2). Under the PSD regulations at 40 CFR 52.21, a project is a major modification for a regulated NSR pollutant if it is projected to result in both a *significant emissions increase* and a *significant net emissions increase*. *See* 40 CFR 52.21(a)(2)(iv); *see also id.* 52.21(b)(2) (defining "major modification").⁵ However, PSD does not apply to pollutants in areas, in which the source would be or is located, designated as nonattainment. *See* 40 CFR 52.21(i)(2).

Based on information in Tesoro's March 7, 2017 submittal, Table 1, below, describes the regulated NSR pollutants that are currently emitted by Tesoro's existing refineries and the attainment status for these pollutants within the District. For NAAQS pollutants, only those pollutants for which the area is designated attainment or unclassifiable need to be evaluated for PSD applicability. *See* 40 CFR 52.21(i)(2). For NAAQS pollutants for which the area is designated nonattainment, the District's Nonattainment New Source Review (NNSR) program applies and EPA Region 9 understands the District has recently completed its review of Tesoro's submittals for those requirements.

⁵ *See also* 40 CFR 52.21(b)(3) (defining "net emissions increase"); 52.21(b)(40) (defining "significant emissions increase"); 52.21(b)(23) (defining "significant"); 52.21(b)(50) (defining "regulated NSR pollutant").

Table 1 - National Ambient Air Quality Standard Attainment Status for South Coast Air Quality Management District

Pollutant	Attainment Status	Permit Program
Nitrogen Dioxide (NO ₂)	Attainment/Unclassifiable	PSD
Nitrogen Oxides (NO _x) <i>as a precursor to ozone.</i>	Nonattainment	NNSR
Sulfur Dioxide (SO ₂)	Attainment/Unclassifiable	PSD
Carbon Monoxide (CO)	Attainment	PSD
Particulate Matter (PM)	n/a	PSD
Particulate matter ≤ 10 micrometers diameter (PM ₁₀)	Attainment	PSD
Particulate Matter ≤ 2.5 micrometers diameter (PM _{2.5})	Nonattainment	NNSR
Volatile Organic Compounds (VOC) <i>as a precursor to ozone</i>	Nonattainment	NNSR
Sulfuric Acid Mist (H ₂ SO ₄)	n/a	PSD

Table 2, below, shows the significance threshold levels⁶ for evaluating projected emission increases and net emission increases for all PSD pollutants proposed to be emitted by the LARIC Project.

Table 2 – Applicable PSD Thresholds for the LARIC Project

PSD Pollutant	Significance Threshold (tons per year)
NO _x	40
SO ₂	40
CO	100
PM ₁₀	15
PM	25
Sulfuric Acid Mist (H ₂ SO ₄)	7

⁶ See 40 CFR 52.21 (b)(23), which sets forth significance thresholds for PSD pollutants, including those for which no NAAQS has been established, such as H₂SO₄.

As described above, under the PSD regulations at 40 CFR 52.21, a project is a major modification if it is projected to result in both a *significant emissions* increase and a *significant net emissions increase*. See 40 CFR 52.21(a)(2)(iv)(a), 52.21(b)(2). If the project is not projected to result in a significant emissions increase for a PSD pollutant, then the preconstruction analysis need not evaluate whether it would result in a significant net emissions increase.

Tesoro's March 2017 PSD Applicability Evaluation presents a two-step analysis in evaluating whether the LARIC Project triggers PSD:

Step 1: evaluate whether the project would result in a significant emissions increase [40 CFR 52.21 (a)(2)(iv)(b)]

Tesoro's calculated project emissions increases under Step 1 for the LARIC Project are shown on pages 16 through 21 of the March 2017 PSD Applicability Evaluation.

Step 2: evaluate whether the project would result in a significant net emissions increase [40 CFR 52.21 (b)(3)]

Tesoro's evaluation of whether a *significant net emissions increase* would occur is presented on pages 21 through 23 of the March 2017 PSD Applicability Evaluation. It evaluated the net emissions increase by summing the increase in emissions from a project (i.e., from Step 1) and any other increases and decreases in actual emissions that are contemporaneous with the proposed project change and are otherwise creditable, and determining whether that sum exceeds zero.

EPA Approval of Alternate Baseline Years for the Carson Cogeneration Unit.

In its June 14-15, 2017 submittal of supplemental information, Tesoro adjusted baseline emissions years for Carson Cogeneration Unit to align with other units' baseline periods included with the PSD analysis (2011/2012 for PM and PM₁₀ and 2012/2013 for all other pollutants). As the baseline years for PM and PM₁₀ are now outside of the 5-year lookback period allowed for existing electric utility steam generating units, EPA may approve an alternate baseline period that is more representative of normal operations. Tesoro made this demonstration by asserting that these periods were most representative since the largest sources of these pollutants were operating normally (i.e., not in a turnaround), whereas later years experienced turnaround events. EPA Region 9 accepts this justification and approves this alternate baseline period pursuant to the provisions of 40 CFR 52.21 (b)(48), as it pertains to our determination of PSD applicability.

EPA Region 9 Verification

To review Tesoro's projected emissions increases, EPA Region 9 verified the source of emissions factors and calculation parameters by reviewing the following documents:

What We Reviewed	Region 9's Review
District Permit Applications Numbers: Wilmington (254766, 131774, 131776 and 131775, 275977, 158019, 303437, 333969, 345953, 520668, 520669, 520670, 567439); Carson (567649, 233118, 395592, 287882, 508456, 508474, 508472, 508473, 557007, 243865).	Basis of emission factors for the following units: Carson Heaters (51 Vacuum Unit LHU Heater, HC R-1, HC R-2 Heaters); Wilmington Heaters (H-101, H-30, H-21/22, H-510, DCU H-100 Heater), Wilmington Boilers 7, 8, 9, 10, SRP Boilers H-1601/1602; Wilmington ICE Engines, Wilmington Abrasive Blast Cabinet
District Rule 1109, NSPS Subpart J, District Permit Conditions (Application Number 552925)	Basis of emission factors for Carson HC R-2 Heater
Toxic Release Inventory Reports for 2012-2014	Basis of H ₂ SO ₄ emissions factors for Carson Cogeneration, Carson FCCU Regenerator, Wilmington FCCU Shutdown, Wilmington CO Boiler Shutdown.
Tesoro Air Emission Inventory Reports for 2011-2014	Basis of CO emission factors for Carson Cogeneration, Carson FCCU Regenerator, Wilmington SRP Incinerator F-704, F-754, Wilmington H-501A, B, 502, 503/504, Wilmington FCCU Shutdown, Wilmington CO Boiler Shutdown.
2012-2013 RECLAIM Data	Basis of NO _x and SO _x emission factors for Carson Cogeneration, Carson FCCU Regenerator, Carson FCCU Pre-Heater, Wilmington SRP Incinerator F-704, F-754, Wilmington H-501A, B, 502, 503/504, Wilmington FCCU Shutdown, Wilmington CO Boiler Shutdown.
October 4, 2011 Source Test Data for the Carson FCCU Generator and FCCU Pre-Heater, submitted in an email dated 5/18/17	To verify the source of PM and TSP emission factors.
AP-42 13.2.1, 13.2.4, 13.2.5	To verify the source of Wilmington Coke Handling emission factors
Manufacturer's Design Guarantee, dated October 19, 2016	To verify projected emission increases for the proposed Sulfuric Acid Regeneration Plant
Shut Down Date of April 28, 2014 for the Wilmington CO Boiler	To verify that emissions reductions are contemporaneous with the projected start-up date
ERC Application from Tesoro to the District for the CO Boiler shutdown	To verify the amount of netting emissions potentially available. <i>(Note: even if the ERC application is not granted by the District, Tesoro could still use these emissions decreases for netting in its PSD analysis as long as the netting criteria in 40 CFR 52.21 are satisfied).</i>

Projected Shut Down Date for Wilmington FCCU (projected to occur between 2017 and 2018)	To verify that emissions reductions are contemporaneous with the projected start-up date of July 2017
Baseline Emissions for Wilmington FCCU	To verify the amount of netting emissions potentially available
Responses to EPA’s 2011 information collection request sent to all petroleum refineries in the United States involving emissions from the Wilmington Operations and the Carson Operations. See https://www.epa.gov/stationary-sources-air-pollution/comprehensive-data-collected-petroleum-refining-sector	To independently verify all baseline emissions data.
Provisions that apply to the Wilmington Operations and the Carson Operations in Consent Decrees in: <i>United States, et al. v. BP Exploration & Oil Co.</i> , Civil No. 2:96 CV 095 RL (Northern District Indiana 2001) and <i>United States et al. v. Motiva Enterprises LLC, et al.</i> , Civil Action No. H-01-0978 (Southern District Texas 2001)	To verify that baseline actual emissions were adjusted to reflect requirements of the consent decrees as required.
“New Method Estimates Sulfuric Acid Emissions from Fired Heaters,” Crane et al., Oil and Gas Journal September 30, 2002.	To verify H ₂ SO ₄ emissions factors for Carson FCCU Pre-Heater, Carson Heaters (51 Vacuum Unit LHU Heater, HC R-1, HC R-2 Heaters); Wilmington Heaters (H-101, H-30, H-21/22, H-510, DCU H-100 Heater), Wilmington Boilers 7, 8, 9, 10, SRP Boilers H-1601/1602
AP 42, Fifth Edition, Volume I Chapter 1: External Combustion Sources, Table 1.4-2	To verify that emissions of the PSD pollutants, Lead, Total Reduced Sulfur and Hydrogen Sulfide are negligible.

Table 5 presents the results of EPA Region 9’s verification of the calculations Tesoro presented to support its conclusion that PSD does not apply. In Tesoro’s PSD Applicability Analysis, six regulated NSR pollutants are potentially subject to PSD permitting: NO_x, SO₂, CO, PM₁₀, PM, and H₂SO₄. Table 5 shows that Tesoro’s analysis did not project a PSD-triggering emissions increase for any PSD pollutant evaluated. The emissions calculations presented in Table 5 rely on information submitted by Tesoro in its March 7, 2017 submittal, which relies, in part, on anticipated emission limits to be issued in District title V permits and Tesoro’s numerous submittals to EPA Region 9 and the District. As such, EPA Region 9’s review of the project, and any conclusions drawn, are limited to the LARIC Project as described in representations made by Tesoro. If Tesoro’s representations or predictions turn out to be inaccurate or if Tesoro does not

meet post construction-related milestones (e.g. completing all construction within the contemporaneous period) additional analysis may be needed to determine whether the LARIC Project triggers PSD requirements and a different conclusion may be warranted.

Table 5 –Emissions Increase Analysis

	Emissions Change (Tons Per Year)					
	NO_x	SO₂	CO	PM₁₀	PM	H₂SO₄
Project Emissions Increase	61.6	54.3	94.6	43.8	43.8	3.8
Contemporaneous Project Emissions and Emissions Decreases	(96.1)	(39.9)	Step 2 analysis not needed	(29.1)	(29.1)	Step 2 analysis not needed
Net Emissions Increase	(34.5)	14.4		14.7	14.7	
PSD Significant Emission Rate	40	40	100	15	25	7
Exceeds Threshold	NO	NO	NO	NO	NO	NO

V. Summary and Conclusion

Based on information provided in the March 7, 2017 submittal and particularly the alternative analysis, described on p. 19 of the March 2017 PSD Applicability Evaluation, EPA Region 9 agrees with Tesoro’s conclusion, set forth on pages 1-2 of its PSD Applicability Evaluation, that the project is not a major modification that requires a PSD permit under 40 CFR 52.21. However, Region 9 is not persuaded from the information presented in the March 7, 2017 submittal that the emissions Tesoro excluded in one version of its analysis, due to claimed demand growth at the Fluid Catalytic Cracking Unit Regenerator and Pre-Heater at its Carson Operations, meets both criteria in 40 CFR 52.21(b)(41)(ii)(c), and thus is not relying on any analysis by Tesoro that excludes those emissions.

Appendix A: Documents Relied Upon By EPA Region 9

1. Tesoro Refining & Marketing Company LLC Los Angeles Refinery – Carson and Wilmington Operations, “Prevention of Significant Deterioration (PSD) Applicability Evaluation - Integration and Compliance Project,” March 2017 (Tesoro March 2017 PSD Applicability Evaluation).
2. Supplement information from Tesoro Refining & Marketing Company that make minor adjustments to its March 2017 PSD Applicability Evaluation, submitted in emails dated June 14-15, 2017.
3. Supporting Calculations for the Tesoro March 2017 PSD Applicability Evaluation, submitted in an email dated March 7, 2017.
4. Manufacturer’s Design Guarantee for the proposed Sulfuric Acid Regeneration Plant, dated October 19, 2016, submitted in an email dated October 19, 2016. This document is included in the Tesoro March 2017 Submittal as part of Attachment J.
5. Emission factor support documentation from Tesoro Refining & Marketing Company, submitted in an email dated May 19, 2017.
6. Applicable Consent Decrees: United States, et al. v. BP Exploration & Oil Co., Civil No. 2:96 CV 095 RL (Northern District Indiana 2001); and Unites States et al. v. Motiva Enterprises LLC, et al., Civil Action No. H-01-0978 (Southern District Texas 2001)
7. Title V Permit Application Submittals to the District for the following: Wilmington (254766, 131774, 131776 and 131775, 275977, 158019, 303437, 333969, 345953, 520668, 520669, 520670, 567439); Carson (567649, 233118, 395592, 287882, 508456, 508474, 508472, 508473, 557007, 243865).
8. EPA’s 2011 information collection request sent to all petroleum refineries in the United States. See <https://www.epa.gov/stationary-sources-air-pollution/comprehensive-data-collected-petroleum-refining-sector>.
9. Tesoro Refining & Marketing Company netting analysis, submitted in an email dated April 15, 2016.
10. Tesoro Refining & Marketing Company response to EPA questions, submitted in an email dated September 21, 2016.
11. Tesoro Refining & Marketing Company Emission Inventory Reports for 2011-2013, submitted in an email dated September 21, 2016.
12. Wilmington Boiler and Heater Emissions Data for 2012-2013, submitted in an email dated May 8, 2017.

13. Emissions Reduction Credit (ERC) Application to District for Wilmington CO Boiler, submitted in an email dated November 16, 2016.
14. "New Method Estimates Sulfuric Acid Emissions from Fired Heaters," Crane et. Al., Oil and Gas Journal September 30, 2002.