U. S. Environmental Protection Agency
Region 2 Office

Response to Comments

On the Clean Air Act
Plantwide Applicability Limit Permit
for the

Limetree Bay Terminal and Limetree Bay Refining
St. Croix, U.S. Virgin Islands

November 2020

ENCLOSURE II

Limetree Bay Refining and Limetree Bay Terminals, St. Croix, U.S. Virgin Islands
Plantwide Applicability Limits (PAL) Permit – November 2020

Response to Comments

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Comments from Limetree Bay Refining and Limetree Bay Terminals – General Comments

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Comment No. 1.

The public hearing exhibited that there is widespread support for the issuance of the PAL permit and one member of the public expressed concerns based on the previous owner's operations. The few questions raised about the draft PAL permit during the public availability session and hearing were largely related to the previous owner's operations. EPA did not make clear in the public notice, the draft PAL permit, during the public availability session, or during the public hearing, that Limetree Bay will be operating at a lower throughput than the previous owner, will be installing controls and making operational changes not in place when the refinery last operated, or that the PAL requires substantial emissions reductions relative to the previous owner's allowable emissions. These material omissions from the record may have addressed some public concerns and should be taken into account when reviewing the public comments.

Response 1

EPA received comments both supporting the issuance of the Plantwide Applicability Limit ("PAL")[1] Permit and requesting to deny the PAL permit. The number of comments for or against a permit is not relevant to the Agency's final permit decision. EPA did explain in the Announcement of Public Comment Period and Fact Sheet that the PAL permit would limit emissions increases to levels that do not trigger PSD requirements. We note that the PAL limits are not established based on changes in allowable emissions. See also EPA Responses to Comments 109(c) and 114(b). Rather, the regulations at 40 CFR § 52.21 only provide for "Actuals PALs," which are determined by adding the baseline actual emissions as defined in 40 CFR § 52.21(b)(48) to the significant level for the PAL pollutant under 40 CFR § 52.21(b)(23). In addition, the PAL permit does not address any throughput limits, installation of controls or the previous owner's allowable emissions, so addressing them in a Public Notice or Public Hearing would not be appropriate.

Comment No. 2.

The introductory paragraph to the draft PAL permit summarizes the draft PAL permit requirements. The language is not always entirely consistent with the underlying PAL language as noted in the comments below. To clarify that the introductory paragraph does not contain binding PAL terms and conditions, Limetree Bay suggests adding a sentence at the end of the introductory paragraph along the following lines: "The applicable permit terms and conditions are set forth below."

Response 2

The introductory paragraph does contain binding terms and conditions. The commenter did not provide an explanation of how the first paragraph of the PAL permit is inconsistent with other conditions in the permit or identify the specific language that would create a conflict. Therefore, EPA declines to include a blanket statement suggesting that the first paragraph doesn't include applicable permit terms and conditions. However, EPA did make a change to Condition II.A of the permit based

[1] The final Plantwide Applicability Limit permit is for seven pollutants. However, for ease of reading, EPA uses the abbreviation "PAL" throughout this document to include both the singular use of the term (one PAL pollutant) and the plural use of the term (two or more PAL pollutants). For example, the term "PAL permit" refers to all seven pollutants covered by the permit.

on another comment submitted by the same commenter (see EPA Response to Comment 5, below) which would have resulted in an inconsistency with the last sentence of the draft permit's first paragraph had the sentence been retained. Therefore, EPA has deleted the last sentence in the first paragraph, of the permit, since the language is more precisely covered in Condition II.A but retained the remaining terms in the first paragraph.

Comment No. 3. Idled Units
The draft PAL permit should reflect that units that are idle on the effective date of the draft PAL permit are not required to comply with the requirements of the draft PAL permit until they resume operation. For example, if the permit would require compliance with monitoring, testing, recordkeeping or reporting requirements within 6 months of the effective date of the draft PAL permit, the Condition should be revised to require monitoring, compliance testing, recordkeeping, or reporting, within 6 months after the effective date of the permit or 6 months after restart of the unit, whichever is later. See, for example, Conditions IV.C.2. (FCCU); V. (Performance Tests); VI. (Recordkeeping); and VII. (Reporting and Notifications), including VII.A.4. (Semi-Annual Monitoring Report).

Response 3
EPA's intent is not to require the Permittee of an idle unit to begin complying with the testing, monitoring, recordkeeping or reporting upon the effective date of this permit. The PAL regulation does not address the timing of testing, monitoring, recordkeeping or reporting for units that are idle at the time of permit issuance. A reasonable benchmark for setting a time period for the idle units can be derived from both 40 CFR § 52.21(aa)(12)(vi)(c), which requires validation testing within 6 months of permit issuance, and other Clean Air Act (CAA or Act) requirements, for example, the New Source Performance Standards, 40 CFR Part 60, which provides 180 days after startup for performance testing. EPA therefore agrees that any testing requirements will apply within 6 months of restarting operation of an idle unit. However, note that any monitoring, recordkeeping or reporting of an idle unit will be required upon restarting such a unit. EPA has added a new Condition N to Section II to address this comment.

Comment No. 4. Validation, Re-validation, Stack and Performance Testing
The draft PAL permit would require validation, re-validation, stack, and performance testing, but the terms are not defined. The draft PAL permit should clarify that validation testing and re-validation testing are not synonymous with stack or performance testing. Only emissions units relying on an emission factor are required to be performance tested under 40 CFR § 52.21(aa)(12)(vi)(c), and only where it is technically practicable.

It is not technically practicable to performance test all of the emissions units in Table W within 6 months of the effective date of the permit because the refinery is currently shutdown, will be restarting, will have numerous obligations upon restart including other requirements to perform testing. Therefore, the PAL should require performance testing to be completed within one year after the effective date of the permit or restart of the unit, whichever is later. See, for example, Conditions III.A.3.c. (Emission Factors); Section V. (Performance Tests) and Table W (Stack Tests Required to Develop Unit Specific Pollutant Emission Factors).

In addition, the term "performance test" should be defined as referring to the testing required in Section V. References to "stack" tests and testing should be replaced with "performance" tests and

testing in Conditions IV.C.2. and IV.C.3. (FCCU), Table C (FCCU); V. (Performance Tests) and Table W (Stack Tests Required to Develop Unit Specific Pollutant Emission Factors).
In addition, "stack test data" should be replaced with "stack or performance test data" in Conditions III.E.I. (General Requirements for Emission Factor-Monitored Emissions Units/Pollutants); IV.D.2. (Heaters); IV.E. (Compressors); IV.F. (Boilers); IV.G. (Gas Turbines); IV.H.3. (SRU Incinerators); IV.J. (Sulfuric Acid Plants); and IV.K.2. (Delayed Coker Steam- Vent).

Response 4
EPA finds no need to define the terms "performance test," stack test data," or "stack or performance test data" in the permit as requested by Limetree since these are terms of common usage that are made clear by the context within the specific conditions of the PAL permit that contain them. In addition, the PAL regulation distinguishes between the information that must undergo validation testing, 40 CFR § 52.21(aa)(12)(vi)(c), and the data that must be re-validated, 40 CFR § 52.21(aa)(12)(ix). However, we agree that re-validation and validation are not synonymous with stack or performance testing. As a clarification, note that data validation or re-validation is an analyte- and sample-specific process that extends the evaluation of data beyond method, procedural, or contractual compliance (i.e., data verification) to determine the analytical quality of a specific data set. All data used to establish the PAL pollutant's emissions must be validated or re-validated through performance testing or other scientifically valid means approved by EPA. A stack test, also referred to in EPA regulations as a performance or source test, measures the amount of a specific regulated pollutant, pollutants, or surrogates being emitted; demonstrates the capture efficiency of a capture system; or determines the destruction or removal efficiency of a control device used to reduce emissions at facilities subject to the requirements of the Clean Air Act. Stack testing is an important tool used to determine a facility's compliance with emission limits or capture or control efficiencies established pursuant to the Act.

40 CFR § 52.21(aa)(12)(vi)(c) is the basis for requiring validation testing of significant emission units within 6 months of permit issuance. Specifically, 40 CFR § 52.21(aa)(12)(vi)(c) states that "if technically practicable, the owner or operator of a significant emissions unit that relies on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factor within 6 months of PAL permit issuance." The New Source Performance Standards, 40 CFR Part 60, to which Limetree's emission units are subject also requires performance testing within 180 days after startup. EPA finds no basis to grant a blanket extension of testing by 6 months in the PAL permit. In the context of validation testing pursuant to 40 CFR § 52.21(aa)(12)(vi)(c), Limetree is not prohibited from bringing to EPA's attention, for EPA's consideration and approval, "technically impracticable" situations that prevent Limetree from complying with validation testing provisions of the PAL permit.

Comment No. 5. "Modification" and "Modified"
The terms "modification," "modified", "modified unit(s)", "modification to a unit", "modified major emission unit", "new or modified future units", "emissions units modified", appear throughout the permit. There are no definitions of these terms. The permit should clarify that "unit" means "emissions unit" and "modify" means a physical change or change in the method of operation of the emissions unit that results in an increase in emissions of a PAL pollutant consistent with the provisions of Section 111(a)(4) of the Clean Air Act. In addition, the reference to "modified future units" should be removed. Future units that are modified would be covered by the modification provisions for existing units. See, for example, Condition I (Plantwide Applicability Limits); III.A.

and III.B. (General Permit Conditions); V. (Performance Tests); VII.A.4. (Semi-Annual Report); VIII.B.8. (Ambient Air Monitoring Requirements).

Response 5
No change to Condition I is needed since EPA merely described generally how emissions from all emission units (including newly added or modified units) shall be added to demonstrate compliance. Condition II.A has been changed to reduce confusion about the distinction between a unit and a source, while remaining consistent with the language of 40 CFR § 52.21(aa)(1)(ii), as follows: "Any physical change or change in the method of operation at the source, including construction of a new emissions unit, which occurs during the effective period of this PAL permit shall not be considered a major modification under 40 CFR § 52.21(b)(2)(i) or have to be approved through the PSD program for a particular PAL pollutant provided that the source continues to comply with the PAL for that particular pollutant through the terms delineated in this permit and the permittee maintains total source-wide emissions below the applicable PAL limit established in Table I-1." The permit has also been changed to track the terminology in the PAL provisions of 40 CFR § 52.21(aa) so that the first time the term "emission unit" is used, it is defined in a parenthetical as "unit." The terms "modify" and "modification" and derivatives thereof in Conditions III.A, III.B, V, and VII.A.4 are included with respect to changes at a "unit" rather than the "source" and are therefore distinct from, and not inconsistent with, Condition II.A or 40 CFR § 52.21(aa)(1)(ii) and do not require a definition. The use of the term "modify" and "modifies" in Condition VIII.B.8 reflect the reality that modifications to the PAL permit or changes in the units could impact the efficacy of the ambient monitoring plan and are also distinct from, and not inconsistent with, Condition II.A or 40 CFR § 52.21(aa)(1)(ii). The term "future units" is not included in the draft permit, so EPA has not made any changes in the final permit; the term "new" units is used in the permit to address future units. However, we do agree that new units that later undergo changes will be governed by permit conditions for existing units that undergo changes.

Comments No. 6a, 6b and 6c Emission Factor Errors

Comment 6a - Rounding of Emission factors Has Not Been Done Consistently
Rounding of emission factors has not been done consistently throughout the draft PAL permit. In addition, the rounding is inconsistent with actual test data, AP-42, and other published emission factors used to establish the PAL. The rounding is inconsistent with the baseline calculations used in the PAL permit application, which are used to derive the PAL. See, for example Section IV: Table B-2 (Flare Gas Monitoring); Table D-2 (Heaters – unit Specific Emission Factors based on Stack Tests/AP-42); Table E (Heaters – Default Emission Factors in lb/MMBtu); Table G (Compressors – Default Emission Factors in lb/MMBtu); Table I (Boilers – Default Emission Factors in lb/MMBtu); and Table J-3 (Gas Turbines – Default Emission Factors).

Response 6a
EPA rounded the emission factors to a higher or a lower number in the PAL permit calculation methodologies based on the potential to emit estimates which appear to have resulted in inconsistencies between some of the baseline calculations and the permit calculation methodologies. EPA agrees with the comment that all factors should be rounded to a higher or a lower number in a consistent manner. Therefore, EPA has revised the emission factors to address the rounding inconsistencies by accepting the emission factors proposed by the permittee in the conditions noted in the comment.

Comment 6b Updates to AP-42 or other default calculation methodologies
There are numerous references in the draft PAL permit that require Limetree Bay to adopt new emission factors or calculations methodologies associated with AP-42 updates. If, in the context of periodic review of information EPA publishes a new AP 42 factor or otherwise, determines that one of the predictive emission factor equations used to establish the PAL in the draft PAL permit issued to Limetree Bay is erroneous, this must be addressed through the process established by 40 CFR § 52.21(aa)(8)(ii)(*a*)(*1*) and the references should be deleted. Accordingly, the provisions in the following Conditions should be deleted. See, for example, Conditions IV.A.2. (Flares); IV.B.1. and 2 (Tanks); IV.H.3. (SRU Incinerators); IV.H.5. (Beavon Units Cooling Towers); IV.N.1. and 2 (Local Sales Rack and Service Station); IV.O.2. (Marine Loading Operations and Thermal Oxidizer Control); IV.P.2. (Material Handling); and IV.Q.2 (Road Traffic).

Response 6b
EPA agrees with the comment that if any new or updated emission factors or calculation methodologies for AP-42 become available, such changes will need to be addressed through the process established by 40 CFR § 52.21(aa)(8)(ii)(*a*)(*1*). This process requires the reopening of the PAL permit to address such changes. Therefore, the provisions in the following Conditions are deleted. Conditions IV.A.2 (Flares); IV.B.1 and 2 (Tanks); IV.H.3 (SRU Incinerators); IV.H.5 (Beavon Units Cooling Towers); IV.N.1 and 2 (Local Sales Rack and Service Station); IV.O.2 (Marine Loading Operations and Thermal Oxidizer Control); IV.P.2 (Material Handling); and IV.Q.2 (Road Traffic). EPA has added a new general condition (II.M)) to clarify this issue. The reason for deleting these provisions is that if we base a PAL level on an old emission factor but determine compliance under the PAL permit through calculations using a new emission factor, there will be inconsistencies in the calculations which will lead to uncertainty about whether or not the PAL level has been exceeded. As a result, it is important to use the same emission factor for both calculation of the PAL level and to demonstrate compliance with the PAL. Therefore, if EPA or the Permittee seeks to incorporate a new AP-42 emission factor into the permit requirements, EPA will need to reopen the PAL permit under 40 CFR § 52.21(aa)(8)(ii)(*a*)(*1*) to correct the baseline and PAL level.

Comment 6c Changes in Emission factors
Conditions in the draft PAL permit require calculation of emissions using prescribed emission factors, consistent with the emission factors used to establish the PAL, "unless more representative emission factors become available." If a more representative emission factor becomes available or an emission factor is changed by rounding, the changed emission factor would have to be used both to calculate emissions and to modify the PAL for consistency in the application of the emission factors. See, for example: Conditions II.M. (General Permit Conditions Site-Specific Emission Factors); III.A.3. (Emission Factors); III.E. (General Requirements for Emission Factor-Monitored - Emissions Units/Pollutants); IV.D.2 for process heaters listed in Table D-2 (Heaters – unit Specific Emission Factors based on Stack Tests/AP- 42); IV.E. (Compressors); Table F (Compressors – Unit Specific Emission Factors based on Stack Tests); IV.F. (Boilers); IV.G. (Gas Turbines); IV.H.2. (Sulfur Recovery Units (SRU), Beavon Units, Incinerators, Sulfur Pits); IV.H.3. (SRU Incinerators); and IV.M.1. (Oily Wastewater Collection System and Treatment Plant).

Response 6c
Emission factors can either be derived in a manner that is specific to a particular unit on site or from tables in AP-42. There is a preference for site- and unit-specific emission factors but, if the specific emission factors aren't available, AP-42 is the best general representation of emission factors for a particular class of units. EPA agrees with the comment that if a more representative AP-42 emission

factor becomes available, the changed emission factor would have to be used both to calculate emissions and to modify both the PAL baseline and PAL limit, for consistency in the application of the emission factors. AP-42 emission factors are not site-specific and represent a general emission factor for a class of units. Since they are not site-specific, an update to an AP-42 emission factor, which could lead to either a higher or lower estimate of emissions, does not represent a change in the operation or efficiency of a site-specific unit. Therefore, to ensure equivalency between the baseline and the permittee's demonstration of compliance with the PAL limits in Condition I, it would be necessary for EPA to reopen the PAL permit pursuant to 40 CFR § 52.21(aa)(8)(ii)(*a*)(*1*) should the permittee or EPA seek to adjust the baseline and PAL limits based on the changes in the AP-42 emission factors. EPA has added a new general condition (II.M) to clarify this issue. EPA has a different view with respect to emission factors that are specific to a particular site and emission unit (site/unit-specific). A site/unit-specific emission factor represents the most accurate picture of emissions from a particular emissions unit at the time the unit is tested. Therefore, the site/unit-specific emission factor that was used to calculate emissions for purposes of the baseline was an accurate representation of that particular unit at that time. Assuming that there is an updated site/unit-specific factor generated after PAL permit issuance, the updated factor doesn't reflect an error in the factor used for purposes of the baseline. Rather, it reflects some change in the efficiency or operation of the unit over time. Therefore, unlike updates to AP-42 emission factors, there is no basis to update the PAL baseline for changes in site/unit-specific emission factors after PAL permit issuance because site/unit-specific factors, whether they are used for the baseline or the PAL limits, in most cases, will be the best representation of the actual baseline.

Comment No. 7. Regulatory References
Throughout the draft PAL permit, EPA has selectively incorporated the applicable PAL regulations, leaving out flexibilities built into the regulations and modifying other regulatory references making them more stringent than the regulations. The draft PAL permit should accurately reflect the applicable regulations. See, for example, Condition I. (Plantwide Applicability Limits); II.A. (Physical Changes), II.B. (PAL Renewal), II.D. (Monitoring of Emissions); II.E. (Monitoring Systems); II.F. and II.G. (Recordkeeping and Reporting); II.I. (PAL Implementation and Enforcement); II.L. (Maximum Potential Emissions); II.M. (PAL Limits); and III. (Monitoring Methods).

Response 7
The commenter cites to conditions of the PAL without any explanation of how the language of those conditions restricts the flexibility of the PAL. EPA disagrees with the comment that it has selectively incorporated applicable regulations, leaving out flexibilities built into the regulations. The regulation citations are provided as references and the language in the provisions cited by the commenter merely summarizes the regulatory requirements; the regulatory provisions speak for themselves. Note that many of the conditions in sections IV through VII amplify the regulatory requirements with more specific language. EPA has made no change to the permit conditions in response to this comment.

Comment No. 8. Common Stack
Where emissions from more than one source are emitted from a single stack, the PAL permit should make clear that validation, performance and stack testing of emissions units may be conducted on the combined stack. See, for example, Condition VI.D. (Heaters), IV.F. (Boilers), and V. (Performance Tests). See, for example, #3 Vac Unit heaters H-4201 and H- 4202; #3 Platformer heaters H-4451

through H-4454; (4 Platformer heaters – H5451 through H- 5454; Boilers 8 and 9; and Sulfuric Acid Plant Heaters H-7801, H-7802 and R-7801.

Response 8
EPA agrees with the comment that where emissions from more than one unit are emitted from a single stack, the validation, performance and stack testing of emission units may be conducted on the combined stack. In the event that the permittee wants to exercise this option, rather than testing units individually, the test must be conducted with all units vented to the same stack operating simultaneously at the time of testing. EPA added Condition II.O to address this comment.

Comment No. 9. New Stack Test Results
The draft PAL permit should be revised to reflect that if there is a change in the stack test results, and there is a physical change or change in the method of operations at the source, Limetree Bay should use the new stack test results to determine compliance with the PAL. If, however, there is no physical change or change in the method of operation, and there is a statistically significant difference, then the PAL(s) should be re-set. See, for example, Condition II.M. (General Permit Conditions), IV.C.1. (FCCU monitoring for NO_x, CO and SO_2), and IV.C.2. (FCCU monitoring for PM, PM_{10}, $PM_{2.5}$ and VOC).

Response 9
Condition VII.A.7 of the PAL permit requires that the Permittee report any such changes or updates in its semi-annual reports to EPA for review. The commenter has not provided sufficient explanation about why the PAL should be "reset" in some circumstances and not others. It is more effective for Limetree to request a permit reopening as the need arises rather than delineating all the possible circumstances in the permit. It is not unusual for sources to request permit changes from EPA when circumstances dictate the need for a change. This comment is raised again in a slightly different context in Comment No. 29. See also EPA Response to Comments 6c and 29. EPA has made no change to any permit conditions in response to this comment.

Comment No. 10. Weekly Calculations to Determine Monthly Emissions
Various conditions in the draft PAL permit require Limetree Bay to calculate emissions "at a minimum, on a weekly basis." Each of these conditions should be revised to clarify that emissions calculations are required on a monthly basis. Because the prescribed frequency of calculating source-wide actual emissions is monthly, a requirement to perform more frequent emissions calculations is unnecessary in order to demonstrate compliance with the PAL. See, for example, Condition III.E.1. (General Requirements for Emission Factor-monitored Emissions Units/Pollutants); IV.A.2. (Flares); Table B-2 (Flare Gas Monitoring); IV.B and IV.B.1 (Tanks); IV.C.2 (FCCU monitoring for PM, PM_{10}, $PM_{2.5}$ and VOC); IV.D.3 (Heaters – fuel flow rate and fuel heat content); IV.E. (Compressors); IV.F. (Boilers); and IV.G. (Gas Turbines).

Response 10
The comment concerns the frequency of calculation rather than the frequency of monitoring. EPA agrees with the commenter that there is no need to perform the calculation on a weekly basis given that the PAL limits in Section I of the PAL are established on a 12-month rolling basis. However, EPA will continue to require monitoring of the parametric data and CEMS data with the frequency specified in Sections III and IV of the permit. EPA clarified this issue in Condition III.E.1. (General Requirements for Emission Factor-monitored Emission Units/Pollutants); Table IV-A-2, previously

named Table B-2 (Flare Gas Monitoring); Conditions IV.B and IV.B.1 (Tanks); Condition IV.C.2 (FCCU monitoring for PM, PM_{10}, $PM_{2.5}$ and VOC); Condition IV.D.3 (Heaters – fuel flow rate and fuel heat content); Condition IV.E. (Compressors); Condition IV.F. (Boilers); and Condition IV.G. (Gas Turbines). See also EPA Response to Comment 33, below.

Comment No. 11. Conflicting PAL Emissions Calculation Language
Many Conditions similar to Condition IV.B.3 contain the following language: "The 12- month total…shall be calculated monthly by adding the emissions for the current month to the sum of the monthly emissions for the previous 11 consecutive months." This is inconsistent with the general monitoring provisions of the draft PAL permit in Section III.D.2, which contains language to cover the first 11 months after issuance. Because this concept is adequately covered by the general monitoring provisions in Section III.D.2. (Calculation Procedures), we recommend that the language regarding the calculation where it appears in Section IV be deleted.

Response 11
EPA agrees with the comment that the draft permit contained many conditions similar to the language, "The 12-month total….shall be calculated monthly…..for the previous 11 months." in Sections III and IV. Further, the Section IV conditions' language appears to be redundant with the Section I condition: "Total plantwide emissions, based on a 12-month rolling total, shall not exceed the emission limits in Table I-1. The Permittee, starting from the effective date of this permit, shall sum the actual emissions of each emission unit ("unit") across the entire plant by PAL pollutant every month, including the emission units in the Appendix to this permit and any newly added units, to demonstrate compliance with the Table I-1 limits. For each month during the first eleven (11) months from the PAL effective date, the Permittee shall add the emissions from each emission unit for the current month to the sum of the preceding monthly emissions since the PAL effective date to demonstrate compliance with the PAL listed in Table I-1."

EPA has therefore deleted all references to the 12-month rolling calculation related language from Section III Conditions E2 and Section IV Conditions B3, C3, D3, E, F, G, H2, H5b, J2, K2, L3, N2, O3, P3, Q3, R4 and S3 because Condition I already requires that "each" emission unit be summed to calculate the monthly and annual emissions.

Comment No. 12. Specification in Monitoring Method
In Condition IV.D.2. (and others), the parenthetical referring to using the best, most current data available, is either ambiguous or unduly constraining and must be revised or deleted. The parenthetical should say "e.g." instead of "i.e." and should include continuous emissions monitoring system ("CEMS"), parametric emissions monitoring system ("PEMS"), and continuous parameter monitoring system ("CPMS"). Otherwise, the parenthetical could be construed as prohibiting the use of continuous monitoring data or data from performance tests other than "stack test data." which would be inconsistent with using the best and most accurate data available. See, for example, Condition IV.D.2. (Heaters); IV.E. (Compressors); IV.F. (Boilers) IV.G. (Gas Turbines); IV.H.3 (Sulfur Recovery Units (SRU), and IV.J.2.b (Sulfuric Acid Plants).

Response 12
EPA agrees that the parenthetical, as well as the other language after the phrase "using the Default Emission factors in Table…," introduces ambiguity. This ambiguity could result in practical enforceability problems. In addition, restricting the emission factor to the default AP-42 emission factors in the referenced tables for units without unit-specific factors is reasonable because the AP-42

factors were used to establish the baseline and PAL level. This will ensure consistency between the baseline/PAL level and the measurements of compliance with Section I of the PAL permit. Therefore, EPA has revised Condition IV.D.2. (Heaters); IV.E. (Compressors); IV.F. (Boilers) IV.G. (Gas Turbines); IV.H.3 (Sulfur Recovery Units (SRU), and IV.J.2.b (Sulfuric Acid Plants) to remove the ambiguity and constraints. For example, Condition IV.D.2 now states: "For a heater unit with site-specific emission factors in Table D-2 (renamed IV-D-2), emissions shall be determined using the emission factors listed in Table D-2. For units without site-specific emission factors for any pollutant, emissions shall be determined using the Default Emission factors in Table E (renamed IV-D-3)." EPA has similarly revised conditions in IV.E. (Compressors); IV.F. (Boilers) IV.G. (Gas Turbines); IV.H.3 (Sulfur Recovery Units (SRU), and IV.J.2.b (Sulfuric Acid Plants).

Comment No. 13. Table numbering
Limetree Bay requests that EPA renumber the tables by referencing the section in which they appear, e.g., Table R will become Table VI.P.1.

Response 13
EPA agrees to update the Table numbering.

Comment No. 14. Redundancy
Redundant language in the draft PAL permit is also a general problem, where numerous provisions are repeated more than one time. This creates the risk, as with this particular provision, of inconsistency. See, for example, Condition II.F. and II.G. are redundant of Sections VI and VII.

Response 14
EPA agrees to remove the redundancy in Conditions II.F & G because the same language is in Section VI and VII, respectively. EPA has therefore revised Conditions II.F and II.G to be generic while retaining the language in Section VI and VII.

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Comments from Limetree Bay Refining and Limetree Bay Terminals –
Section I – Plantwide Applicability Limits

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Comment No. 15. The PAL Permit Can Supersede Some Emissions Limits

Condition I of the draft PAL permit contains a table of "PAL Limits" by pollutant based on a 12-month rolling total. The last sentence in Condition I says, "[t]his condition does not supersede any applicable emission limits contained in any other federal or state permit or applicable regulation," which is incorrect. Pursuant to 40 CFR § 52.21(aa)(1)(ii)(*c*), the limits in EPA-issued PSD permits for purposes of ensuring non-applicability of substantive PSD requirements with respect to certain pollutants ("(r)(4) limits") are eliminated by the issuance of the PAL permit. See also, 40 CFR § 52.21(aa)(9)(v), referencing "emission limitations that had been established pursuant to paragraph (r)(4) of this section, but were eliminated by the PAL in accordance with the provisions in paragraph (aa)(1)(ii)(*c*)." See, also, *Technical Support Document for the Prevention of Significant Deterioration (PSD) and Nonattainment Area New Source Review (NSR): Reconsideration* (EPA-456/R-03-005), U.S. EPA, Oct. 30, 2003, at pp. 90-91, noting that "[m]any commenters opposed eliminating synthetic minor limits when a PAL is created," while others supported this provision.

EPA, while finalizing the rule, responded as follows:

"We agree with the commenters who supported eliminating synthetic minor limits for sources under a PAL, and we are not changing the final rules in this regard. We agree with commenters that maintaining (r)(4) limits under the PAL would preclude use of the PAL for sources that would otherwise elect to participate in a PAL, resulting in less use of the PAL provisions and ultimately less environmental benefit. We also agree with the commenter who stated that the PAL serves the same purpose as the (r)(4) limits do, which is to avoid circumvention of major NSR permitting." *Id.* Attachment 1 to this comment letter includes a list of the (r)(4) limits in EPA-issued PSD permits that will be eliminated as a result of the issuance of the PAL permit. This is not an exhaustive list. The PAL should reflect that U.S. Virgin Island Department of Planning and Natural Resources ("DPNR") issued synthetic minor limits may also be removed consistent with 40 CFR § 52.21(aa)(1)(ii)(*c*).

Response 15

EPA agrees that the last sentence of Section I does not accurately reflect the language of the PAL regulation. Therefore, EPA has added the following phrase to the last sentence of Condition I: "except as provided under paragraph 40 CFR § 52.21(aa)(1)(ii)(c) of the PAL regulation." Any revisions to the PSD or state-issued permits that reflect the lifting of the (r)(4) restrictions will be handled through separate permit actions. Although the exception has been added at the end of Condition I, we note that EPA did not review the list of conditions in Attachment 1 of the commenter's comment letter to determine whether the listed conditions qualify for deletion from other Limetree permits. Limetree will need to submit a separate application to EPA and the DPNR requesting such a review after the issuance of the Final PAL Permit.

Comment No. 16. The NO_X PAL Is Too Low

Table A incorrectly lists the NO_X PAL as 5,231 tons per year. The correct NO_X PAL is 5,594 tons per year. Attachment 2 to this letter includes the correct NO_X PAL calculations.

Limetree Bay's review of the docket suggests EPA's calculation of the NO_X PAL was as follows:

6,617 tons per year (Limetree Bay proposal, November 26, 2018)

153 (adjustment for incorrect emission factor)

6,464 tons per year (Limetree Bay proposal, May 8, 2019)

1,080 (EPA adjustment for units permanently shut down, August 14, 2019)

This NO_X PAL calculation reflects two separate calculation errors. First, as correctly noted by EPA in its letter to Limetree Bay dated August 14, 2019, Limetree Bay used an incorrect NO_X emission factor for eleven emissions units in its initial PAL permit application submitted on November 26, 2018, and this use of an incorrect NO_X emission factor caused Limetree Bay's initial proposed NOx PAL of 6,617 tons per year to be too high by 153 tons per year. Limetree Bay subsequently provided a corrected NO_X PAL calculation to EPA as part of the supplement to the PAL permit application submitted on May 8, 2019. See, docket item EPA- R02-OAR-2019-0551-0008. In this supplement, Limetree Bay proposed a corrected NO_X PAL of 6,464 tons per year (*i.e.,* 6,617 tons per year minus 153 tons per year). However, EPA's calculation double-counts the adjustment required to correct this error, which causes EPA's NO_X PAL calculation to be low by 153 tons per year. Second, as correctly noted by EPA in its letter to Limetree Bay dated August 14, 2019, Limetree Bay permanently shut down six emissions units subsequent to submittal of the PAL permit application on November 26, 2018, and the contributions of these emissions units must be excluded from the PAL calculation. However, the 1,080 tons per year value listed in the EPA letter of August 14, 2019, is incorrect. The total baseline actual NO_X emissions from these six combustion units, as documented in Table C-5 of the PAL permit application, and Attachment 2 to this letter, is 870 tons per year (2009-2010 baseline period). This error causes EPA's NO_X PAL calculation to be low by 210 tons per year.

Response 16
Based on EPA's review of Limetree's May 30, 2019 letter to the VIDPNR, EPA's August 14, 2019 letter to Limetree and the explanation provided in Limetree's comment on the NOx PAL level, EPA agrees that the draft PAL permit's NOx PAL of 5,231 tpy contains two errors that need to be corrected. In Limetree's PAL application, the PAL for NOx was proposed as 6617 tpy based on the 2009-2010 24-month baseline period. The first error pertains to the deduction of NOx emissions associated with the permanent shutdown of six emission units in July 2019. 40 CFR § 52.21(aa)(6)(i) requires that "emissions associated with units that were permanently shut down" after the baseline period "must be subtracted from the PAL level." The six units emitted 870 tpy of NOx during the PAL baseline years of 2009-2010, therefore, EPA should have reduced the PAL by 870 tpy. However, EPA inadvertently subtracted 1080 tpy of NOx, incorrectly using Limetree's NOx emissions during 2004-2005. The final NOx PAL has therefore been increased by an additional 210 tpy (should have deducted only 870 tpy instead of 1080 tpy) to address the first error.

The second error pertains to the deduction of 153 tpy from the NOx baseline due to Limetree's use of the wrong emission factor, in its application, for calculating baseline emissions of 11 combustion units. EPA deducted 153 tpy twice while recalculating the NOx baseline which resulted in a PAL in the draft permit that was 153 tpy lower than it should have been. It was first deducted when EPA sent its August 14, 2019 letter to Limetree and then it was deducted again when the final baseline and PAL numbers were being established at the time of issuing the draft PAL permit. EPA is therefore

adding back to the PAL 153 tpy for the 11 combustion units and 210 tpy for the six permanently shut down units (total increase of 363 tpy) and has reset the NOx PAL at the correct level of 5594 tpy.

Comment No. 17. Reference to Modified unit(s)
Condition I refer unnecessarily to "modified unit(s)" because those units are already listed in the Appendix.

Response 17 – EPA agrees with the comment that the Appendix already includes all units that might be modified in the future and, as such, it would be redundant to use both "Appendix" and "modified units" as terms in Condition I. EPA has revised the condition and removed the reference to "modified units" from Condition I. In addition, EPA has added the following sentence to the end of Condition III.B to ensure that modified units retain the name originally used in the Appendix: "In the event of a modification to a unit, the Permittee shall retain the name of the unit as it appeared in the Appendix to this permit upon permit issuance."

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Comments from Limetree Bay Refining and Limetree Bay Terminals –
Section II – General Permit Conditions

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Comment No. 18. Condition II.A.: Physical Change or Change in the Method of Operation
Condition II.A. of the draft PAL permit suggests that, during the term of the PAL permit, the only changes that are not subject to the applicability provisions of 40 CFR § 52.21(a)(2)(iv) and to PSD review requirements at 40 CFR § 52.21(j) through (r) are "[a]ny physical change or change in the method of operation of existing emissions sources and/or construction of new emissions sources." This provision could be construed to exclude projects that do not involve physical or operational changes to emissions units, but the rule language refers to any physical change or change in the method of operation of the stationary source. Accordingly, this condition of the draft PAL permit must be revised to cover all types of projects at the major stationary source, consistent with the underlying regulation at 40 CFR §§ 52.21(a)(2)(iv)(*a*), (a)(2)(v), (b)(2)(iv), and (aa)(1)(ii)(*a*).

Response 18
To more closely track the language of 40 CFR § 52.21(aa)(1)(ii), EPA has clarified Condition II.A. to reflect that any physical change in or change in the method of operation at the "major stationary source" -- rather than "emissions sources" – that complies with the conditions of the PAL permit and the PAL regulatory provisions, and maintains the emissions below the PAL level would not be a major modification for the PAL pollutant. See EPA Response to Comment 5. We have also added a parenthetical in the first sentence of the first paragraph of the PAL permit to define the "major stationary source comprising a refinery and related terminal operation" as "the source."

Comment No. 19.
Both the introductory paragraph of the draft PAL permit and Condition II.A appear to say that, in the event of non-compliance by Limetree Bay with any requirement of the draft PAL permit, including Section VIII relating to ambient air and meteorological monitoring networks, projects at the major stationary source may be subject to the applicability provisions of 40 CFR § 52.21(a)(2)(iv) and to PSD review requirements at 40 CFR § 52.21(j) through (r). The reference to ambient air and meteorological monitoring networks is inconsistent with the underlying regulation at 40 CFR §§ 52.21(a)(2)(iv)(*a*), (a)(2)(v), (b)(2)(iv), and (aa)(1)(ii)(*a*), which expressly provide for non-applicability of the cited requirements without regard to ambient air and meteorological monitoring. As EPA notes, the ambient air monitoring is unrelated to demonstrating compliance with the PAL limits.

Limetree Bay suggests this condition be revised as follows:
Any physical change or change in the method of operation ~~of existing emissions sources and/or construction of new emissions sources at this plant which occur(s)~~ at this stationary source for which actual construction begins during the effective period of this PAL permit shall not be subject to the PSD requirements at 40 CFR § 52.21(a)(2)(iv) or 52.21(j) through (r) for a particular pollutant provided that the source continues to comply with the PAL for that particular pollutant through the terms delineated in ~~this permit~~ Sections I through VII of this permit and the permittee maintains total source-wide emissions below the applicable PAL ~~limit~~ established in Table A (40 CFR § 52.21(aa)(1)(ii)).

Response 19
Condition II.A is intended to track the PAL regulatory language. Therefore, EPA has adjusted the language to more closely approximate the language of 40 CFR § 52.21(aa)(1)(ii). The language in 40 CFR § 52.21(aa)(1)(ii) does not include the phrase "for which actual construction begins" or the citations offered by the commenter. Therefore, we have not included them in the revised Condition II.A. EPA disagrees with the comment that reference to any non-compliance with Section VIII relating to ambient air and meteorological monitoring is inconsistent with the PAL regulation (see EPA Response to Comments 108-110). 40 CFR § 52.21(aa)(1)(ii) makes clear that PAL permittees must meet the requirements of paragraphs (aa)(1) through (15) to ensure that physical changes and changes in the method of operation at the major stationary source are not major modifications for the PAL pollutant. Among the provisions in paragraphs (aa)(1) through (15) is 40 CFR § 52.21(aa)(7) which specifies the contents of the PAL including "any other requirements that the Administrator deems necessary to implement and enforce the PAL." 40 CFR § 52.21(aa)(7) (x). The ambient monitoring conditions in Section VIII of this permit are necessary to implement EPA's discretionary authority under 40 CFR § 52.21(aa)(8)(ii)(*b*)(*3*) to reopen and reduce the PAL, if necessary, to avoid a NAAQS violation. EPA would not, as a matter of course, exercise the 40 CFR § 52.21(aa)(7) provision to include ambient monitoring requirements in a PAL permit. However, there are unique circumstances with respect to this particular facility that require ambient monitoring. See, for example, EPA Response to Comment 106.

Comment No. 20. Condition II.B.: PAL Renewal
Condition II.B. of the draft PAL permit suggests the PAL permit might expire even if Limetree Bay has submitted a timely and complete application to renew the PAL permit. Similarly, the introduction to the draft PAL permit indicates that the PAL permit is effective for 10 years until surrendered or expired. To clarify both, Condition II.B. should be revised to be consistent with the underlying regulation at 40 CFR §§ 52.21(aa)(7)(iii) and (aa)(10)(ii). Limetree Bay suggests this condition of the draft PAL permit be revised to read as follows:

If the Permittee applies to renew this PAL permit in accordance with 40 CFR §52.21(aa)(10), the PAL shall not expire at the end of the PAL effective period. It shall remain in effect until a revised PAL permit is issued by the EPA. If the Permittee ~~applies~~ does not timely submit a complete application to renew the PAL permit in accordance with the procedures of 40 CFR § 52.21(aa)(10), the PAL permit shall expire and the permittee shall be subject to the requirements of 40 CFR § 52.21(aa)(9).

Response 20
EPA has revised the language in Condition II.B to eliminate ambiguity and more closely track the language of 40 CFR § 52.21(aa)(7)(iii), (aa)(9) and (aa)(10). The revised language is as follows: "If the Permittee applies to renew this PAL permit before the end of the PAL effective period and in accordance with the timing and other requirements of 40 CFR §52.21(aa)(10), the PAL shall not expire at the end of the PAL effective period and shall remain in effect until a revised PAL permit is issued by the EPA. If the Permittee does not timely submit a complete application to renew the PAL permit in accordance with the procedures of 40 CFR § 52.21(aa)(10), the PAL permit shall expire at the end of the PAL effective period and the permittee shall be subject to the requirements of 40 CFR § 52.21(aa)(9)."

Comment No. 21. Condition II.D.: Monitoring of Emissions
Condition II.D. would require Limetree Bay to monitor all emissions in accordance with the monitoring requirements in the permit and 40 CFR § 52.21(aa)(12) and to use the calculation procedures in Section IV of this permit to convert monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total. Condition II.D. is redundant of the specific monitoring requirements in Section III and IV and should be deleted.

Response 21
EPA agrees to revise Condition II.D to eliminate the duplicative monitoring requirements of Conditions III and IV. However, EPA finds it necessary to add reference to 40 CFR § 52.21(aa)(12) in Condition III.A to also eliminate any ambiguity associated with this deletion. The second sentence of Condition III.A now reads as follows: "The Permittee shall comply with 40 CFR § 52.21(aa)(12) and use one of the following four general monitoring approaches, in order…" [See also Response to Comment 22 regarding changes to Condition II.D.]

Comment No. 22.
40 CFR § 52.21(aa)(12) states that "[e]ach PAL permit must contain enforceable requirements for the monitoring system that accurately determines plantwide emissions of the PAL pollutant in terms of mass per unit of time or CO_2e per unit of time." Ambient air monitoring for environmental justice ("EJ") impacts is not monitoring Limetree Bay's plantwide emissions of PAL pollutants to determine the facility's compliance with its PAL limits and is not measuring mass per unit of time. Rather, it is monitoring the ambient concentration of emissions of certain PAL pollutants from all sources in the vicinity of the monitor. Therefore, the monitoring requirements in Section VIII, may not legally be included in a PAL permit as more fully described in Section VIII.

If Condition II.D does not get deleted, it should at a minimum be revised as follows to make clear that ambient air monitoring is not required under 40 CFR § 52.21 and to add Section III, which also adds monitoring requirements:

The Permittee shall monitor all emissions units in accordance with the monitoring requirements in ~~this permit and~~ 40 CFR § 52.21(aa)(12) and shall use the calculations procedures in Sections III and IV of this permit to convert monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total.

Response 22 – EPA does not agree with the commenter's statement that the ambient monitoring conditions in Section VIII of the permit may not be legally included in a PAL permit. See EPA Response to Comments 19 and 108-110 for discussion of EPA's legal authority to include ambient monitoring. However, EPA agrees with the commenter that 40 CFR § 52.21(aa)(12) concerns emissions monitoring requirements rather than ambient monitoring requirements and that the calculation procedures referenced in Section III of the permit are also applicable to Condition II.D. As such, Condition II.D has been revised to clarify that the monitoring requirements refer to emissions monitoring, as follows:

> II.D. The Permittee shall monitor all units in accordance with the emission monitoring requirements in this permit and 40 CFR §52.21(aa)(12) and shall use the calculation procedures in Section III and IV of this permit to convert emissions monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total.

Comment No. 23. Condition II.E.: Monitoring Systems
Condition II.E. states that Limetree Bay's failure to implement and use a monitoring system that meets the requirements of this permit and 40 CFR § 52.21(aa)(12) renders the PAL permit invalid. This statement is incorrect. Section 52.21(aa)(12) requires monitoring using mass balance calculations, CEMS, CPMS or PEMS and emission factors to determine compliance with the PAL limits on a mass per unit of time or CO_2e per unit of time basis. It does not speak to implementation of monitoring.

In addition, failing to perform **ambient air monitoring**, as required by Section VIII, which is not a method used to determine compliance with the PAL, would not render the PAL invalid. Condition II.E. should be revised as follows:

Failure to ~~implement and~~ use a monitoring system or method that meets the requirements of ~~this permit and~~ 40 CFR § 52.21(aa)(12) shall render the PAL permit invalid (40 CFR § 52.21(aa)(12)(i)(*d*)).

Response 23
EPA's intent for Condition II.E is to require that the permittee must use an emission monitoring system, comprised of unit-specific emission monitoring requirements as specified in the permit. We have added the term "emission" before "monitoring system" to clarify the purpose of 40 CFR § 52.21(aa)(12) which is to monitor emissions and deleted the word "implement" to avoid redundancy with the word, "use." For those emission units for which monitoring systems are not specified, the permittee must use a system that meets 40 CFR § 52.21(aa)(12). Since the emission monitoring provisions of the permit carry out 40 CFR § 52.21(aa)(12), the permittee must meet the unit-specific monitoring requirements in the permit or risk being subject to 40 CFR § 52.21(aa)(12)(i)(*d*)). Thus, EPA has retained the language requiring the permittee to "meet the requirements of this permit." EPA has clarified the condition to address this comment. EPA agrees that the language of 40 CFR § 52.21(aa)(12) refers to emissions monitoring rather than ambient monitoring, and therefore EPA has revised the language to address the comment, EPA does not agree that the permittee's failure to comply with the ambient monitoring will have no consequences for the validity of the PAL permit. 40 CFR § 52.21(aa)(1)(ii) requires permittees to comply with the requirements in paragraphs (aa)(1) through (15), and with the PAL permit, to retain the flexibilities of the PAL permit. Ambient monitoring conditions are included in the PAL permit pursuant to 40 CFR § 52.21(aa)(7) (see EPA Response to Comment 19, above) and therefore compliance with the ambient monitoring conditions is required.

Comment No. 24. Conditions II.F. and II.G., Recordkeeping and Reporting
Section II.F is redundant with Section VI, and Section II.G. is redundant with Section VII and both should be deleted. In the alternative, if these are retained, the following changes should be made. Section II.F. would require Limetree Bay to retain the records as required by the permit and in accordance with 40 CFR § 52.21(aa)(13) for a period of 5 years from the date of record. Records of ambient air monitoring pursuant to Section VIII are not requirements of 40 CFR § 52.21(aa)(13). Therefore, the 5-year recordkeeping and reporting requirements do not apply to Section VIII. Condition II.F and II.G. should be revised as follows:

The Permittee shall retain the records as required by ~~this permit and~~ 40 CFR § 52.21(aa)(13) for a period of at least 5 years from the date of record. The records may be retained in an electronic format.

The Permittee shall submit the reports required in Sections I-VII of this permit ~~pursuant to this permit~~ to the permitting authority (EPA Region 2) in accordance with 40 CFR § 52.21(aa)(14) and at the address in Section VII of this PAL permit. The reports may be submitted in an electronic format.

In the alternative, the permit conditions should make clear that the recordkeeping and reporting under 40 CFR §§ 52.21(aa)(13) and (14) do not apply to Section VIII.

Response 24
The commenter has not demonstrated any inconsistency between Condition II.F and Section VI or Condition II.G and Section VII. In addition, Conditions II.F and II.G contain language that is not in Sections VI or VII (e.g., making electronic format permissible). Therefore, EPA has retained the language. In addition, EPA does not agree that recordkeeping requirements in 40 CFR § 52.21(aa)(13) should not be applied to the ambient monitoring conditions in Section VIII because 40 CFR § 52.21(aa)(13) requires recordkeeping "necessary to determine compliance with any requirement of paragraph (aa) of this section," (emphasis added) which includes 40 CFR § 52.21(aa)(1)(ii) and 40 CFR § 52.21(aa)(7)(x). See EPA Responses to Comments 19 and 23, above. The generic reporting requirements referenced in Condition II.G of the draft PAL permit, and the more detailed requirements in Section VII, are specific to emission monitoring and do not include reporting requirements for ambient monitoring which remain in Section VIII to ensure enforceability of the conditions in Section VIII.

Comment No. 25. Condition II.I., PAL Implementation and Enforcement
Condition II.I. of the draft PAL permit is not authorized by the PAL provisions and must be removed. This Condition would give EPA unfettered authority during the term of the PAL permit to impose, without any administrative safeguards, any other conditions that it deems necessary to implement and enforce the PAL permit. The rule provision cited by EPA as purportedly providing a basis for this unauthorized condition is 40 CFR § 52.21(aa)(7)(x). This provision does not provide EPA with authority unilaterally to impose additional conditions, at some unspecified future date. Rather, the cited provision provides EPA with narrow authority to include, in the PAL permit at the time of issuance, other requirements that EPA deems necessary to implement and enforce the PAL permit.

EPA's authority under the PSD rule to impose additional requirements, subsequent to initial issuance of the PAL permit, is circumscribed by the conditions for reopening in 40 CFR § 52.21(aa)(8)(ii), which is reflected in Condition II.H. of the draft PAL permit. Otherwise, this provision would effectively enable EPA to circumvent Limetree Bay's opportunity for review under 40 CFR § 124.19.

Response 25
EPA agrees that 40 CFR § 52.21(aa)(7)(x) is intended to apply at the time of permit issuance. EPA has deleted Condition II.I.

Comment No. 26. Condition II.K.: Joint and Several Liability
Condition II.K., states that Limetree Bay Refining and Limetree Bay Terminal are "jointly and severally liable" for non-compliance with any condition of this permit. EPA does not have legal authority to impose "joint and several" liability under the Clean Air Act and there is no authority

cited by EPA. Rather, the permit is issued to the owners and operators and the owners and operators are required to comply with the permit and are responsible for any failure to comply.

Response 26
Without adopting the commenter's view on joint and several liability, EPA has revised Condition II.K (Renamed as II.J) because we do not see the need to address joint and several liability in the PAL permit. Therefore, the language of Condition II.J now reads: "Limetree Bay Terminals, LLC and Limetree Bay Refining, LLC, are each required to comply with all conditions in this permit."

Comment No. 27. Condition II.L.: Maximum Potential Emissions
Condition II.L., mis-states 40 CFR § 52.21(aa)(12)(vii). A source owner or operator must record and report maximum potential emissions without considering enforceable emission limitations or operational restrictions for an emissions unit during any period of time that there is no monitoring data, unless another method for determining emissions during such periods is specified in the PAL permit. The permit condition should be revised to match the regulation.

For PAL compliance purposes, the Permittee shall record and report the maximum potential emissions without considering enforceable emission limitations or operational restrictions ~~or use of a control device~~ for an emissions unit during any period of time when there are no monitoring data <u>unless another method for determining emissions during such periods is specified in the PAL permit</u> (40 CFR § 52.1(aa)(l 2)(vii)).

Using default maximum potential to emit ("PTE") in most cases as this permit currently provides would grossly overstate actual emissions and produce an inaccurate emissions calculation. For this reason, EPA has promulgated alternative missing data provisions and a missing data provision was included in the Capitol Power PAL permit, EPA-R3-PAL-001. Consistent with 40 CFR § 52.21(aa)(12)(vii), Limetree Bay proposes adding the following language to Condition II.L.:

"Limetree Bay may use missing data substitution procedures set forth in Table II.L. or other means approved by EPA where data from the monitoring method specified in the PAL permit is missing or invalid."

#	Type of missing monitoring data	Procedure for replacing missing data
1	CEMS/CPMS	Data missing for 10% or less of the operating hours in a given month. No data substitution procedures are needed to compute the monthly emissions rate. Use monthly average emissions rate and hours of operation to calculate monthly emissions. In the event that the CEMS/CPMS is inoperable for more than ten percent (10%) of the operating hours in the month, the Permittee shall calculate an average of the five (5) highest hourly emission rates monitored from the emission unit or stack in the month.
2	Fuel Usage or Throughput Data	Data missing for 10% or less of the operating hours in a given month. No data substitution procedures are needed to compute the monthly total. Use monthly average fuel usage or throughput and hours of operation to calculate monthly emissions. In the event that the fuel usage or throughput data is unavailable for more than ten percent (10%) of the operating hours in the month, the Permittee shall substitute with the maximum monthly fuel usage for the given unit/units during the preceding 12-month period taking into account best engineering estimates of operational rates of the affected unit/units.
3	Parameters determined based on periodic sampling and analysis	Missing data shall be filled using the maximum test result from the preceding four valid test results of the same type.
4	Initial 60 days of operation after idled emissions unit startup or a new emissions unit startup	For the first 60 days after startup of an idled emissions unit or a new emissions unit, use best engineering estimates for any data that cannot reasonably be measured or obtained according to the requirements of this subpart.
5	Missing data, not covered in another section of this table	Use an analogous data substitution method set forth in 40 CFR Part 98 or other credible evidence.

Response 27
40 CFR §52.21(aa)(12)(vii) provides discretion to the permitting authority to specify another method in the permit for determining emissions during periods when there is no monitoring data. The commenter is correct that we exercised discretion in the Capitol Power Project to include missing data provisions like the ones included in the commenter's table. However, we decline to exercise that discretion here because of differences between the Limetree and Capitol Power facilities and because the commenter has not demonstrated that the methods are appropriate for this particular facility. Compared to Limetree, the Capitol Power Plant permit has far fewer emission units (over 200 at the Limetree facility and approximately half a dozen at the Capitol Power Plant) and, therefore, the level of complexity that could result from the alternative methods at a refinery presents practical enforceability concerns that one would be less likely to expect at a power plant. By requiring the owner or operator to record and report maximum potential emissions without considering enforceable emission limitations or operational restrictions during periods without monitoring data, 40 CFR §52.21(aa)(12)(vii) creates a simple, unambiguous and environmentally protective approach to missing data. Although alternative methods can be approved by EPA, they are done so on a case-by-case basis. This Permittee did not propose alternative methods, with support for those alternatives, in its permit application and has not provided any information in the comment to demonstrate that the approaches used in the Capitol Power Project PAL would be practically enforceable and technically sound at its refinery. While EPA has not adopted the commenter's complex substitution procedures, we have deleted the phrase, "or use of a control device" from Condition II.L (now renamed II.K) since that language is not in 40 CFR §52.21(aa)(12)(vii) and is covered by the phrase, "without considering enforceable emission limitations or operational restrictions," which is in the permit and 40 CFR §52.21(aa)(12)(vii).

Comment No. 28. Condition II.M.: PAL Limits
Condition II.M. of the draft PAL permit is ambiguous in three respects and must be revised to improve clarity as to what is required.

The first sentence of Condition II.M. refers to certain emission factors "that were used to establish the PAL pollutant," but no emission factors were used to establish the PAL pollutants. The PAL pollutants are established only by the list of pollutants in the first column of Table A in Condition I of the draft PAL permit. Limetree Bay suggests revising this clause to refer to emission factors "that are used to demonstrate ongoing compliance with the PAL in Condition I."

Condition II.M. must be revised to remove ambiguity regarding the meaning of the term "re-validated." Emission factors are intended to provide a quantitative representation of long-term average relationships between emission rates and activity levels for emissions units of a particular class. The results of an individual performance test at an individual unit cannot be expected to match precisely the emission factor for that class of emissions unit, and a test result that varies from the emission factor cannot be said categorically to invalidate the emission factor. Limetree Bay suggests that data used to establish a PAL, such as an emission factor, shall be deemed to be re-validated if the difference between the initial data and the validation data is not statistically significant. If the validation data is not statistically different from the initial data, then no update to the emission factor derived from the initial data is required. If the validation data are statistically different from the initial data, then the PAL shall be updated using the validation data-based emission factor. Limetree Bay suggests the use of a 95 percent confidence level to determine if a validation data-based emission factor statistically differs from the data or factor used to establish the PAL. The updated emission factor shall be used to 1)

administratively update the PAL in accordance with 40 CFR § 52.21(aa)(8)(ii); and 2) used to determine future emissions for that emissions unit for purposes of determining compliance with the applicable PAL.

The third sentence of this condition, which pertains to operational parameter ranges, is not authorized by 40 CFR § 52.21(aa)(12)(ix) and is redundant with Condition III.A.3.b of the draft PAL permit. Condition II.M must be revised to delete the unauthorized and redundant third sentence.

The following language must be deleted:
The units where such testings have occurred must be operated within the range of the operational parameters established during the performance tests. (40 CFR § 52.21(aa)(12)(ix)).

Response 28
EPA agrees with the comment that the first sentence of Condition II.M. of the Draft PAL Permit is incorrect as stated. The emission factors were not used to establish the PAL pollutants, but to estimate the baseline actual emissions which, in turn, were used to establish the PAL limits in tons/year for the pollutants. EPA has therefore changed the first sentence of Condition II.M (renamed II.L) as follows:

> ”All site-specific emission factors that were used to establish the PAL pollutant limits in Table I-1 and demonstrate ongoing compliance with the PAL in Table I-1 after permit issuance must be re-validated through performance testing or other scientifically valid means approved by the EPA.”

EPA reviewed the comment related to the ambiguity regarding the term “revalidated” in Condition II.M. EPA agrees that an emission factor would provide an average relationship between emission rates and activity levels for emissions units of a particular class of emission units, e.g., boilers. An emission factor developed or validated during individual performance tests conducted at different times for the same unit would not exactly match every time a test is conducted. There would be some variation in the resulting emission factor from one performance test to another. EPA therefore agrees that the use of a 95 percent confidence level to determine if a validation data-based emission factor statistically differs from the data or factor used to establish the PAL is reasonable. However, if the validation data are statistically different from the initial data – less than 95% confidence level – then the PAL shall be updated using the validation data-based emission factor. The updated emission factor shall be used to determine future emissions for that emissions unit for purposes of determining compliance with the applicable PAL. EPA will consider, on a case by case basis, whether an adjustment to the PAL level is warranted as a result of validation testing. See EPA Response to Comment 6c. EPA revised Condition II.M (renamed Condition II.L) to address this comment.

EPA agrees that the third sentence of Condition II.M (now Condition II.L), “The units where such testings have occurred must be operated within the range of the operational parameters established during the performance tests,” is not a requirement of 40 CFR § 52.21(aa)(12)(ix). That sentence has been deleted from the condition.

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Comments from Limetree Bay Refining and Limetree Bay Terminals –
Section III – Monitoring Methods

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Comment No. 29.
Condition III.A.3.c of the draft PAL permit must be revised to remove ambiguity regarding the meaning of the term "validation" to be used in the event that the results of a unit- specific performance test are determined to invalidate the emission factor previously used. Emissions rates at each individual unit in a class of emissions units vary with time. Emission factors are intended to provide a quantitative representation of long-term average relationships between emission rates and activity levels for emissions units of a particular class. The results of an individual performance test at an individual unit cannot be expected to match precisely the emission factor for that class of emissions unit, and a test result that varies from the emission factor cannot be said categorically to invalidate the emission factor, as suggested in Limetree Bay's comment # 28 on II.M.

Response 29
EPA agrees with the comment that, "emissions rates at each individual unit in a class of emission units vary with time. Emission factors are intended to provide a quantitative representation of long-term average relationships between emission rates and activity levels for emission units of a particular class. The results of an individual performance test at an individual unit cannot be expected to match precisely the emission factor for that class of emissions unit...." However, for site-specific emission factors for an emission unit, as discussed above in EPA Response to Comment 28, updated site-specific emission factors are the best representation of a particular unit at the time of the test. Therefore, an updated site-specific emission factor for an emission unit should be used by the permittee for purposes of determining compliance with Condition I of the permit. As discussed above in EPA response to Comment 28, data used to establish a PAL, such as an emission factor, shall be deemed to be re-validated if the difference between the initial data and the validation data is not statistically significant. We can apply the same approach for validation testing to determine a site-specific factor within 6 months. If the validation data is not statistically different from the initial data, then no update to the emission factor derived from the initial data is required. If the validation data are statistically different from the initial data, then the PAL shall be updated using the validation data-based emission factor. It does not appear that the commenter is asking for a change to the draft permit language in Condition III.A.3.c, however, EPA revised the condition to clarify the validation testing for existing, modified and new units. EPA also added a new Condition III A.3.d to define a statistically significant difference as less than 95% confidence level. In the event that validation testing produces a result that is statistically significant, i.e., less than 95% confidence level of the prior emission factor, the updated emission factor shall be reported in the semi-annual report as required by Condition VII.A.7 and used for determining future emissions for that emission unit for purposes of determining compliance with the applicable PAL. EPA made changes to Condition III.A.3.c and added Condition III.A.3.d to clarify this issue.

Comment No. 30.
In addition, and separately, this condition in the draft PAL permit must be revised in order to be consistent with the underlying regulation at 40 CFR § 52.21(aa)(12)(vi)(*c*). Specifically, the condition must be revised to clarify that testing is not required for those emissions units and

pollutants for which testing within the specified timeframe is not practicable or for which EPA determines testing is not required.

Response 30
EPA agrees that subsection 40 CFR § 52.21(aa)(12)(vi)(*c*) includes the terms "if technically practicable" and "unless the Administrator determines that testing is not required." However, the presumption is that validation testing shall be conducted to determine a site-specific emission factor for a unit within 6 months of PAL permit issuance. EPA will, however, review and determine, on a case by case basis, a request to either exempt or delay the testing of a particular unit based on a demonstration by the Permittee of technical practicability. EPA has added a new condition, III.A.3.e, to the final permit to address this comment.

Comment No. 31.
Condition III.B of the draft PAL permit, to the extent that it could be construed to apply to existing emissions units listed in the Appendix to the draft PAL permit other than in situations where the unit has been modified in a manner that would require a change in monitoring approach, is not authorized by the PAL provisions of the PSD rule, is inappropriate, and is inconsistent with Condition III.A of the draft permit. To be consistent with Condition III.A of the draft PAL permit, Limetree Bay suggests this condition be revised to read as follows:

For ~~each new and modified unit and other monitoring changes at the units already~~ (1) any new emissions unit that is not included in the Appendix to this permit; (2) any modification to an emissions unit listed in the Appendix to this permit that requires a change in monitoring; and (3) any future monitoring changes to emissions units listed in the Appendix to this permit, the Permittee shall, in accordance with the semi-annual report requirements of Section VII of this Permit, submit to EPA the specific monitoring method for that emissions unit, including formulas and calculation methods, along with a proposed amendment to the Appendix to this permit.

Response 31
EPA agrees to clarify its intent to apply Condition III.B to emissions units contemplated in Condition III.A. Therefore, EPA has revised Condition III.B accordingly.

Comment No. 32.
Condition III.E of the draft PAL permit inappropriately, and without authority in the underlying regulation, would require calculations of actual emissions using emission factors for all "emissions units that do not use CEMS or CPMS/PEMS." This would appear to include emissions units for which mass balance calculations are used pursuant to Condition III.A.4 of the draft PAL permit. Condition III.E must be revised to clarify that calculations of actual emissions using emission factors are required only for emissions units and pollutants for which CEMS, CPMS, PEMS, and mass balance calculations are not in use.

Response 32
Pursuant to 40 CFR § 52.21(aa)(12)(ii)(*a*), mass balance calculations are acceptable for activities using coatings or solvents. Therefore, EPA agrees with the comment and has revised the language of Condition III.E as follows:

> "The emissions units that do not use CEMs, CPMS/PEMS or mass balance calculations to monitor emissions shall use emission factors to calculate the actual emissions on a monthly basis according to the requirements below."

Comment No. 33.
Condition III.E.1 of the draft PAL permit, which would require Limetree Bay to "record the operational data necessary to calculate emissions of the PAL pollutants, at a minimum, on a weekly basis," is inconsistent with the underlying regulation at 40 CFR §§ 52.21(aa)(7)(vi) and (aa)(13)(i), is inappropriate, and would conflict with numerous other provisions of the draft PAL permit. For example, Condition IV.Q of the draft PAL permit would require recording the mileage of each vehicle "on a monthly basis." This monthly recording is sufficient to satisfy the requirement for calculating monthly emissions from vehicle from plant roads; more frequent documentation of vehicle mileage is superfluous, as intra-month records would be of no use in calculating monthly emissions, and thus a more frequent recordkeeping requirement would be arbitrary and capricious. Condition III.E.1 of the draft PAL permit must be revised to require recordkeeping as necessary to perform monthly emission calculations as mandated by 40 CFR § 52.21(aa)(13)(i). Condition III.E.2., to the extent that it contemplates reliance on "weekly" data per Condition III.E.1., must be revised on the same basis.

Response 33
EPA first notes that Condition III.E.1 in the draft permit (now changed to III.E) is a general condition and as such any unit-specific monitoring frequency requirements will supersede this general condition. Weekly monitoring and recording of emissions is not inconsistent with 40 CFR § 52.21(aa)(7)(vi) which requires the permittee to "convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total" (emphasis added). Thus, the conversion is to monthly and annual emissions, but the regulation does not prescribe the frequency of monitoring and recording. Even if it did specify that the monitoring and recording is to be performed monthly, 40 CFR §52.21(aa)(7) specifies the "minimum" requirements for the contents of the PAL permit so EPA could nonetheless require weekly recording. We do note some lack of clarity in the language of Condition III.E.1 in the draft permit regarding the distinction between calculation and monitoring/recording. As such, EPA has revised Condition III.E.1 (now III.E) as follows:

> "The Permittee shall perform monthly calculations using the best available emission factor based on stack or performance test data, vendor information, design/engineering calculations, or literature. Unless a different time period is required in Section IV of this permit, the Permittee shall monitor and record, at a minimum on a monthly basis, the operational data necessary to calculate monthly and annual emissions of the PAL pollutants."

Comment No. 34.
Condition III.E.3 of the draft PAL permit must be deleted because it is redundant of Conditions III.A.3. and V of the draft PAL permit. If Condition III.E.3. is retained, it should cross-reference Condition V as Condition III.A.3. does, by including the language "in accordance with Section V of this PAL permit", including the extension of the 6-month deadline to complete testing in Comment No. 4.

Response 34
EPA agrees that Condition III.E.3 is redundant of Condition III.A.3 because III.A.3 also applies to new units, modified units that require a monitoring change, and future monitoring changes to units listed in the Appendix to this permit. EPA has therefore deleted Condition III E.3.

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Comments from Limetree Bay Refining and Limetree Bay Terminals – Section IV – Specific Monitoring Requirements

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Comment No. 35.

To the extent that Conditions IV.A and IV.A.1 of the draft PAL permit would require use of CEMS to determine SO2 emissions from open flares other than the LPG flare, Conditions IV.A and IV.A.1 of the draft PAL permit, including Table B-1, must be revised to eliminate such requirement. It is not feasible to use a CEMS to quantify emissions from an open flare because the SO2 emissions are created in the open atmosphere and are never present in a pipe or duct as would be required by Performance Specification 2 in appendix B to 40 CFR part 60.

The appropriate monitoring to determine SO2 emissions from open flares other than the LPG flare is the monitoring already required by 40 CFR § 60.107a(e). EPA may not require redundant and unnecessary monitoring as such requirement would be an arbitrary and capricious use of EPA's authority. "SO2 emissions of the gases being flared" are already regulated under NSPS Subpart Ja. NSPS Subpart Ja (40 CFR § 60.107a(e)) requires monitoring for SO2 emissions, flow, heat content and speciation of the gases flared. If the LPG flare is returned to service, SO2 emissions would be calculated using an emission factor as specified in the rule because the flare gases would meet the definition of "inherently low in sulfur," and would not be subject to continuous monitoring requirement. 40 CFR § 60.107a(b).

Response 35

The PAL regulations do not limit the PAL permit monitoring conditions to only the monitoring methods set forth in the New Source Performance Standards. Therefore, EPA does not agree that any conditions that are not identical to the NSPS requirements are arbitrary and capricious. However, EPA agrees that SO2 emissions from an open flare must be monitored by calculations as required in NSPS Subpart Ja, 40 CFR § 60.107a(e), since such emissions are not exhausted through a pipe or duct. With regard to the LPG flare, Limetree is correct that 40 CFR § 60.107a(b) provides for an exemption from the otherwise applicable monitoring requirements if the fuel gases meet the criteria in 40 CFR § 60.107a to be considered "inherently low in sulfur." Because SO2 emissions may be monitored via calculation instead of CEMS, EPA has revised Conditions IV.A. and IV.A.1 to clarify that CEMS are not required to monitor SO2 emissions from an open flare or LPG flare (if the fuel gas meets the exemption in 40 CFR § 60.107a(b)).

Comment No. 36.

Table B-1 of Condition IV.A. of the draft PAL permit should be removed because it is redundant of the text of IV.A and includes the same errors as Condition IV.A. If it remains in the PAL permit it must be revised to 1) list the affected facility/flare by name, which includes the FCCU Low Pressure Flare, FCCU High Pressure Flare, LPG Flare, and Flares 2, 3, 5, 6 and 7, as each of the flares is an affected facility under NSPS Subpart Ja; 2) revise the heading of the second column in Table B-1 to say "Parameter" rather than "Pollutant" because although H2S concentration of flared gases is required to be monitored to determine SO2 emissions from the flares, H2S is the parameter being monitored, not the "pollutant"; 3) revise the parameter for the flares to be "H2S" rather than "SO2" and the monitoring by to be "CPMS" rather than "CEMS", because as discussed above, SO2 emissions from open flares cannot be monitored with a CEMS; and 4) revise the LPG Flare to "not applicable" because the flare gases would meet the definition

of "inherently low in sulfur." Below is an updated and corrected Table B-1, to correct errors as reflected in red font.

Response 36
EPA retains Table B-1 as a summary table for the requirements in Condition IV.A. However, EPA agrees with the changes to Table B-1 as suggested by Limetree: 1) List the name of each flare and its affected facility/location the same way such information was provided in the application by Limetree; 2) Replace "Pollutant" with "Parameter" to avoid confusion that SO2 is the criteria pollutant being monitored; 3) Change the parameter monitored from "SO2" to "H2S" and "CEMS" to "CPMS." This change is appropriate as explained in Response 35 that SO2 emissions from an open flare cannot be monitored by a CEMS. Table B-1, which was revised as discussed above, has been renamed "Table IV-A-1."

Comment No. 37.
Condition IV.A.2 of the draft PAL permit, relating to monthly emissions calculations for flares, provides as follows:

The NOx, CO, PM/PM10/PM2.5, and VOC emissions shall be calculated on a monthly basis using the emission factors described in AP-42, Volume I, Chapter 13.5 except where there is a site-specific emission factor in Table B-2, below. In the event that the methodology in AP-42 is superseded by a more recent edition or editions of AP-42, the permittee shall use the most recent edition to calculate the NOx, CO, PM, PM10, PM2.5, and VOC emissions.

The second sentence of this provision is inappropriate both because it is ambiguous and because it would create inconsistencies between the calculation methods used to establish the PALs and those used for compliance demonstration. It is ambiguous because it is unclear whether the purported requirement to use a new emission factor, which EPA has unilaterally selected without a required rulemaking process, subsequent to issuance of the PAL permit, is applicable to a flare and pollutant for which there is a site-specific emission factor listed in Table B-2 of the draft PAL permit.

Response 37
This comment is addressed in EPA Response to Comments 6b and 6c and the general conditions added to the permit in Conditions II.M and II.N. Consistent with EPA's Response to Comments 6b and 6c, EPA has deleted the last sentence of Condition IV.A.2.

Comment No. 38. Table B-2 of Condition IV.A. Proposed Modifications
The second row of Table B-2 of the draft PAL permit (SO2) must be deleted because it is superfluous and potentially misleading. No condition of the draft PAL permit suggests use of an emission factor approach to calculate actual SO2 emissions from the flares (with the exception of the LPG flare); instead, as discussed above, monitoring of flare gas composition will be used to determine SO2 emissions pursuant to Conditions IV.A and IV.A.1 of the draft PAL permit, which should refer to NSPS Subpart Ja and RSR monitoring requirements.
In the third through eighth rows of Table B-2 of the draft PAL permit, the following language appears in the fourth column: Monitor heat input to flare and other parameters necessary to calculate emissions, at a minimum, on a weekly basis.
This language is ambiguous and must be revised to clarify that only monitoring, not emissions calculations, is required at a frequency greater than once per month. As provided by Condition I

and Condition II.D of the draft PAL permit, emission calculations are required on a monthly basis. Because the prescribed frequency of calculating source-wide actual emissions is monthly, a requirement to perform more frequent emissions calculations for flares would be arbitrary, capricious, and unjustified.

We suggest the following:

Monitor heat input to flare and other parameters at a minimum, on a weekly basis, necessary to calculate monthly emissions.

In the last row of Table B-2 of the draft PAL permit, the proposed emission factor for VOC must be removed. VOC emissions must instead be calculated based on flare gas speciation and a 98 percent destruction efficiency.

Response 38
EPA agrees with the comment that the SO2 emissions from a flare will be calculated in accordance with the NSPS Subpart Ja requirements. As explained in Response 35, SO2 emissions from open flares are appropriately calculated by continuous monitoring and recording of the sulfur concentration in the gas discharged to the flare, as required in NSPS Part 60, Subpart Ja. Therefore, the second row of Table B-2 (which has been renamed Table IV-A-2) is revised to include the NSPS citation. EPA agrees with Limetree that the language in the "Monitoring Parameters" column of Table B-2 (which has been renamed Table IV-A-2) can be read as requiring Limetree to monitor and calculate emissions on a weekly basis. EPA hereby clarifies that the "Monitoring Parameters" column of Table B-2 (renamed Table IV-A-2) for NOx, CO, PM, PM10, PM2.5 and VOC is intended to require Limetree to monitor these pollutants weekly and to calculate the emissions on a monthly basis. EPA has revised this column accordingly.

With regard to the emission factor for VOC, EPA agrees that speciation of a sample of the flare gas will provide more accurate information about the chemical constituents of the flare gas to be combusted. Regarding the assumption of a 98% destruction efficiency, which is achievable when the flares are operated and maintained in compliance with the applicable flaring requirements in 40 CFR § 60.18(b) and with good air pollution control practices for minimizing emissions, EPA agrees this assumption is appropriate provided that Limetree complies with these applicable flaring requirements for the duration of the relevant monitoring periods. EPA revised Table B-2 as discussed above and renamed it as "Table IV-A-2."

Comment No. 39.
Condition IV.B.1. would require the calculation of VOC emission from each tank "at a minimum, on a weekly basis". As provided by Condition I. and Condition II.D. of the draft PAL permit, emission calculations are required on a monthly basis. Because the prescribed frequency of calculating source-wide actual emissions is monthly, a requirement to perform more frequent emissions calculations for flares would be arbitrary, capricious, and unjustified.

We suggest the following changes to Condition IV.B.1.:
The VOC emissions from each tank's working and standing losses as well as roof landing and filling losses shall be calculated, ~~at a minimum on a weekly basis~~, using the methodology in the most recent edition of AP-42, Chapter 7.

Response 39
EPA does not agree that weekly calculations would be arbitrary and capricious. However, as discussed in EPA Response to Comments 10 and 33, there is a distinction between the frequency of calculation and the frequency of monitoring and recording and we agree that calculations under Condition IV.B.1. should be consistent with that in Condition II.D requiring monthly emission calculation. Therefore, EPA revised Condition IV.B.1 to require monthly calculation of VOC emissions.

Comment No. 40
To the extent that the last sentence of Condition IV.B.1. of the draft PAL permit would require supersession of the predictive emission factor equations used to determine baseline actual VOC emissions and to use the most recent edition of AP-42, Chapter 7, it is inappropriate because it would create arbitrary inconsistencies between the calculation methods used to establish the PAL and those used for compliance demonstration. If, in the context of periodic review of information it publishes in AP-42 or otherwise, EPA determines that one of the predictive emission factor equations used to establish the PAL in the PAL permit issued to Limetree Bay is erroneous, this must be addressed through the process established by 40 CFR § 52.21(aa)(8)(ii)(*a*)(*1*). Accordingly, the last sentence of Condition IV.B.1. of the draft PAL permit must be omitted from the final permit.

Response 40
EPA agrees with this comment that the same calculation method should, in this case, be used for establishing the PAL and demonstrating compliance with the PAL. If necessary, any AP-42 revised emission factors will need to be addressed pursuant to the process established by 40 CFR § 52.21(aa)(8)(ii)(*a*)(*1*). EPA, therefore, deleted the last sentence of Condition IV.B.1. See also EPA response to comments 6b and 6c and the general conditions added to the permit in Conditions II.M and II.N.

Comment No. 41.
In Condition IV.B.2., EPA would require the use of AP-42, Chapter 11 for CO and PM emissions. The emission factor used to demonstrate compliance should match the method in the permit application, which used David C. Trumbore vapor correlations for asphalts, as published in 1999 Environmental Progress Vol 18, "Estimates of Air Emissions from Asphalt Storage Tanks and Truck Loading", Asphalt Technology Laboratory. Owens Corning, Summit, IL. Limetree Bay suggests the following changes to Condition IV.B.2.:

The CO and PM emissions from each tank storing asphaltic materials shall be calculated monthly using the procedures in the most recent edition of AP-42, Chapter 11 as published by David C. Trumbore et all (1999). Otherwise, the CO and PM limits in the PAL permit need to match the method prescribed by EPA.

Response 41
EPA agrees that the emission factor used to calculate Limetree's actual emissions for establishing the PAL should, in this case, also be used to demonstrate compliance with the PAL. This emission factor was listed in Appendix B-11 of the PAL application. EPA revised Condition IV.B.2 to state that the CO and PM emissions from each tank shall be calculated according to AP-42.

Comment No. 42.
Condition IV.B.4. of the draft PAL permit prescribes the use of a true vapor pressure value in excess of 11.1 psia in calculating actual VOC emissions from floating roof tanks. This Condition should be removed because it could result in underestimating actual emissions, contrary to the requirements of 40 CFR § 52.21(aa)(7)(iv).

Response 42
EPA agrees with Limetree that although a true vapor pressure value of 11.1 psia was used in calculating the actual VOC emissions from floating roof tanks as presented in the PAL application, restricting Limetree to use a vapor pressure of 11.1 psia or higher could result in underestimating the emissions to be reported by Limetree. Therefore, EPA removed this permit condition and added new language into Condition IV.B related to actual vapor pressure. The vapor pressure of the liquid being transferred should be used in calculating the VOC emissions.

Comment No. 43.
The title of Section IV.C. of the draft PAL permit should be revised to clarify that this section applies only to the FCCU Catalyst Regenerator (STK-7501). Conditions IV.C.1-3. of the draft PAL permit prescribe testing, monitoring, recordkeeping, and emissions calculation requirements for a single emissions unit, the FCCU catalyst regenerator. The FCCU is a large process unit that includes multiple emissions units. Emissions units other than the FCCU catalyst regenerator are covered by other sections of the draft PAL permit, such as equipment leaks, which are covered by Condition IV.L. of the draft permit, and catalyst handling activities, which are covered by Condition IV.P. of the draft permit.

Response 43
EPA agrees with Limetree that the permit should label emission units with as much detail as possible to avoid confusion, especially when the FCCU is a large process unit with components subject to different applicable requirements. EPA has revised the condition to clarify that this section applies only to the FCCU Catalyst Regenerator.

Comment No. 44.
Condition IV.C.1. and Table C of the draft PAL permit, relating to calculation of emissions of NOX, CO, and SO2 from the FCCU catalyst regenerator, must be revised to allow determination of exhaust gas flow rate using the methods required by 40 CFR §§ 63.1564(b) and 63.1573. These calculation methods have been established by U.S. EPA as an alternative to correlations based on FCCU feed rate.

Response 44
The permit does not specify any method to determine the exhaust flow rate and volume. EPA accepts Limetree suggestion to specify the methods in the NESHAP regulations. EPA added the provision allowing the permittee to determine exhaust flow rate using the methods in 40 CFR § 63.1564(b) and 40 CFR § 63.1573 and deleted reference to the FCCU feed rate from Table C because the commenter's suggested method is more accurate. Table C has been renamed to "Table IV-C-1."

Comment No. 45.
Condition IV.C.3. and Table C of the draft PAL permit, relating to calculation of emissions of PM, PM10, PM2.5, and VOC from the FCCU catalyst regenerator, must allow, in the alternative,

the determination of exhaust gas flow rate using the methods in 40 CFR §§ 63.1564(b) and 63.1573. In addition, with respect to PM, PM10, and PM2.5, these conditions must allow, in the alternative, emissions calculations based on coke burn rate in the catalyst regenerator, consistent with the requirements in the facility's title V operating permit.

Response 45
Consistent with EPA's response in Response 44, EPA revised Condition IV.C.3 and Table C to allow determination of exhaust gas flow rate using the methods in 40 CFR §§ 63.1564(b) and 63.1573. EPA also revised Condition IV.C.3 and Table C to allow for alternative calculation methods based on coke burn rate, consistent with the PSD permit. The revised Table C has been renamed to "Table IV-C-1."

Comment No. 46.
With respect to PM10 and PM2.5, the conditions must be revised to allow the use of particle size fractions, in conjunction with filterable PM stack test results, to determine site-specific emission factors. Specifically, because U.S. EPA has not developed or approved a test method for emissions of filterable PM10 or filterable PM2.5 from wet stacks, and has expressly prohibited the use of Method 201A for this purpose, the particle size fractions listed in Table 5-2 of U.S. EPA's *Emissions Estimation Protocol for Petroleum Refineries* may be applied. These particle size fractions, which were used to calculate baseline actual emissions from the FCCU catalyst regenerator and to establish the PALs for PM10 and PM2.5, are 0.97 for filterable PM10 and 0.80 for filterable PM2.5.

Response 46
EPA agrees with the comment that since EPA has not developed test methods for emissions of filterable PM10 or filterable PM2.5 from wet stacks and is not allowing Method 201 for this purpose, the particle size fractions provided by this comment and also used in estimating the baseline actual emissions from FCCU catalyst regenerator should be used to calculate the emissions for the PAL compliance purposes. Therefore, EPA revised Condition IV.C.3 accordingly. Based on comments 45 and 46, EPA has also provided alternate emissions calculation methods for PM, PM10, PM2.5 and VOC in Condition IV.C.2.

Comment No. 47.
In Table D-2 of Condition IV.D. of the draft PAL permit, emission factors for H-4455 (NOX), H-8501A (CO) and H-8501B (CO and PM) are incorrectly rounded. Limetree Bay suggests that the emission factors remained as proposed in the submitted PAL application, as these are the emission factors used in the calculation of the baseline actual emissions. Below is an updated and corrected Table D-2 to correct errors as reflected in red font.

Response 47
For the same rationale given in Response 38 above, EPA accepts Limetree request not to round off the emission factors for H-4455 (NOX), H-8501A (CO) and H-8501B (CO and PM) in Table D-2 of Condition IV.D. EPA accepted the corrected Table D-2 emission factors and has revised the permit accordingly. As per EPA Response to Comment 13, the revised Table D-2 has been renamed as "Table IV-D-2." See also EPA Response to Comment 6a.

Comment No. 48.
For Table E of Condition IV.D., Limetree Bay proposes to use AP-42 emission factors, as published in AP-42, Chapter 1.4, Tables 1.4-1 and 1.4-2 to reduce discrepancies in rounding. For Fuel Gas, AP-42 prescribes dividing the proposed emission factors in Tables 1.4-1 and 1.4-2, depicted in units of pounds per million standard cubic feet (lb/MMscf), by 1,020 British thermal units per standard cubic feet (Btu/scf). For No. 6 Fuel Oil, AP-42 prescribes dividing the proposed emission factors in Tables 1.3-1 and 1.3-2, depicted in units of pounds per thousand gallons (lb/Mgal), by the fuel heat input in units of million British thermal units per thousand gallons (MMBtu/Mgal). Furthermore, for No. 6 Fuel Oil, the emission factors can be simplified into a single row because the sulfur content is included as part of the affected pollutant emission factor, as applicable. This approach ensures accurate SO2 emission calculations based on the fuel actual sulfur content. Limetree provided an updated and corrected Table E to address rounding issues and other errors with this comment.

Response 48
Limetree's proposal to use emission factors as published in AP-42, Chapter 1.4, Tables 1.4-1 and 1.4-2 to reduce discrepancies in rounding is acceptable because these are EPA published emission factors. EPA accepts the updated and corrected Table E (Condition IV.D emission factors) and has revised the permit accordingly. As per EPA Response to Comment 13, the revised Table E has been renamed as "Table IV-D-3."

Comment No. 49.
In Table F of Condition IV.E., the draft PAL permit contains an emission factor based on the higher of two stack tests for NOx and CO lbs/MMBtu, as conducted in 2009 and 2010, rather than the average of the two tests, which was used to determine baseline actual emissions. Table F should be corrected to use the average to be consistent with the calculated baseline actual emissions and to be representative of the actual emissions from the compressors. If EPA determines that one of the emission factors used to establish the PAL in the PAL permit issued to Limetree Bay is erroneous, this must be addressed through the process established by 40 CFR § 52.21(aa)(8)(ii)(*a*)(*1*). Below is a revised Table F reflecting such changes as depicted in red font.

Response 49
As explained in Response to Comment 40, EPA agrees that the same emission calculation method used to establish the PAL should generally be used to demonstrate compliance with the PAL. EPA accepts the updated and corrected Table F (Condition IV.E emission factors) and has revised the permit accordingly. As per EPA Response to Comment 13, the revised Table F has been renamed as "Table IV-E-1."

Comment No. 50.
Table G of Condition IV.E. contains the following errors and should be corrected as follows: (1) 4SRB and 4SLB are defined as spark ignition rich/lean burn and should be 4 stroke rich/lean burn; (2) the header "lb/MMBtu" in the second column is redundant and confusing and should be repositioned; (3) second and fourth row should list ≥ and not > 90% load, according to AP-42, Volume I, Chapter 3.2, Tables 3.2-2 and 3.2-3; and (4) certain emission factors were rounded up, Limetree Bay considers that the emission factors should remain as published in AP- 42 and not arbitrarily rounded. See revised Table G, below with changes depicted in red font.

Response 50
EPA accepts Limetree's correction to defining "SRB" as "Spark Ignition 4 Stroke Rich Burn" and "SLB" as "Spark Ignition 4 Stroke Lean Burn" since it clarifies the types of engines Limetree uses at its plant. EPA has also corrected several typographical errors in Table G (now Table IV-E-2) and made minor adjustments consistent with AP-42, in particular, repositioning of "lb/MMBtu" in the second column, replacing " >" with " ≥" according to AP-42 in the second and fourth rows, and replacing rounded off AP 42 emission factors with original AP-42 values. As per EPA Response to Comment 13, the revised Table G has been renamed as "Table IV-E-2."

Comment No. 51.
For Table I of Condition IV.F., Limetree Bay proposes to use AP-42 emission factors, as published in AP-42, Vol. I, Chapter 1.4, Tables 1.4-1 and 1.4-2 to reduce discrepancies in rounding. For Fuel Gas, AP-42 prescribes dividing the proposed emission factors in Tables 1.4-1 and 1.4-2, depicted in units of pounds per million standard cubic feet (lb/MMscf), by 1,020 British thermal units per standard cubic feet (Btu/scf). For No. 6 Fuel Oil, AP-42 prescribes dividing the proposed emission factors in Tables 1.3-1 and 1.3-2, depicted in units of pounds per thousand gallons (lb/Mgal), by the fuel oil heat input in units of million British thermal units per thousand gallons (MMBtu/Mgal). Furthermore, for No. 6 Fuel Oil, the emission factors can be simplified into a single row because the sulfur content is included as part of the affected pollutant emission factor, as applicable. This approach ensures accurate SO2 emission calculations based on the fuel actual sulfur content. Below is an updated and corrected Table I to address rounding issues and other errors, as reflected in red font.

Response 51
Limetree's proposal in its comment to use the methods, units, factors, etc. as stated in AP-42, is accepted because these are EPA published emission factors. EPA accepts the updated and corrected Table I (Condition IV.F emission factors) and has revised the permit accordingly. As per EPA Response to Comment 13, the revised Table I has been renamed as "Table IV-F-2."

Comment No. 52.
Table J-3 of Condition IV.G. needs to be corrected for rounding issues in the emission factors and other errors, as shown below. Limetree Bay considers that the emission factors should remain as published in AP-42, Volume I, Chapter 3.1 and not arbitrarily rounded. For Distillate Oil, the emission factors can be simplified because the sulfur content is included as part of the affected pollutant emission factor, as applicable. For Fuel Gas/LPG, NSPS Ja has been added, as applicable. See revised Table J-3, below, with changes indicated in red font.

Response 52
For the same rationale given in Response 38 above, EPA accepts Limetree's request not to round off the emission factors in Table J-3 and replace them with those from AP-42, Volume I, Chapter 3.1 which includes the simplified emission factors for distillate oil and NSPS Ja for fuel gas/LNG. See also EPA Response to Comment 6a. EPA accepts the updated and corrected Table J-3 (Condition IV.G emission factors) and has revised the permit accordingly. As per EPA Response to Comment 13, the revised Table J-3 has been renamed as "Table IV-G-3."

Comment No. 53.
Section IV.H. of the draft PAL permit should be re-titled to "Sulfur Recovery Units (SRUs)" to reference only Sulfur Recovery Units because the regulated emissions points differ, but all are part of the SRUs.

Response 53
Condition IV.H, in the draft permit, titled "Sulfur Recovery Units (SRU), Beavon Units, Incinerators, Sulfur Pits." Based on the review of the application and the process flow diagram in the application, EPA notes that the sulfur recovery process area includes sulfur recovery units and other units listed in the condition title of the draft permit. In order to clarify that the emission units listed in the title of Condition IV.H are not separate emission units but are all part of the sulfur recovery plant , EPA revised the title of this condition to "Sulfur Recovery Plants (Sulfur Recovery Units, Beavon units, Incinerators, Sulfur Pits, Cooling Towers)," the same way Limetree has titled Section 6.3.4.3 of the PAL application for the sulfur recovery plants.

Comment No. 54.
Condition IV.H.1. of the draft PAL permit should be removed because it is inaccurate (as will be explained below) and redundant of Condition IV.H.3. with respect to the units being monitored, the methods, and the parameters.

Response 54
EPA reviewed Conditions IV.H.1 and IV.H.3. and agrees with the comment that IV.H.1 and IV.H.3 both refer to Sulfur Recovery Units and Beavon Units. Based on further review of the comments 55 and 56, EPA has deleted condition IV.H.1. and replaced it with the condition for SO2 monitoring requirements only for the Sulfur Recovery Units.

Comment No. 55.
Condition IV.H.2. of the draft PAL permit would require monitoring of "SO2 emissions for the sulfur recovery units and Beavon units using the CEMS." This provision must be revised to clarify, consistent with 40 CFR §§ 60.102a(f) and 60.106a(a), that SO2 CEMS are required only for a sulfur recovery plant with an oxidation control system or a reduction control system followed by incineration. The Beavon unit at the West Sulfur Recovery Plant is a reduction control system not followed by incineration; when the Beavon unit is in operation, no SO2 is emitted from the West Sulfur Recovery Plant, and use of an SO2 CEMS would be arbitrary, capricious, and inappropriate.

Response 55
EPA's requirement of SO2 emissions monitoring in Condition IV.H.2 was not arbitrary and capricious. It was based on the information Limetree provided in Section 6 – Proposed PAL Calculation Procedures – of the PAL application; Table 6-1 states that SO2 would be monitored from the East and West Sulfur Recovery Areas with the SO2 CEMS. However, EPA agrees that SO2 monitoring with a CEM is not a requirement for a Beavon unit at the West Sulfur Recovery Area because it is a reduction unit not followed by an incinerator. EPA recognizes that a Beavon Unit is a sulfur recovery device and would not have SO2 emissions except during malfunction, process overflow or maintenance shutdown. Therefore, instead of imposing the SO2 CEM requirement, the existing SO2 monitoring requirement from the Prevention of Significant Deterioration (PSD) Permit should continue to apply. EPA revised Condition IV.H.2 of the draft permit (now Condition IV.H.1 due to the deletion of the former Condition IV.H.1) by deleting

the SO2 CEM requirement and stating that monitoring of SO2 emissions from the East and West sulfur recovery areas shall be conducted in accordance with the 1997 PSD Permit. The PAL Permit includes the calculation procedures that are required to be used to calculate the SO2 emissions from those sulfur recovery areas. Table L-1 is also deleted after the revision since SO2 CEMS is the only requirement in this table. Table L-2 is now renamed "Table IV-H-1".

Comment No. 56.
Condition IV.H.4. should be titled "West Side Beavon Unit" to reflect that only the West Side Sulfur Plant has a Beavon Unit that would require the calculation in Condition IV.H.4. The Beavon unit at the West Side Sulfur Recovery Plant is a reduction control system not followed by incineration.

Response 56
Condition IV.H.4 in the draft permit is titled "Beavon Units (aka tail gas units)," reflecting the units listed in Limetree PAL application. The application lists baseline emissions for East Side Beavon Unit and West Side Beavon Unit. Limetree made the decision to permanently shut down the East Side Beavon Unit recently in response to the Consent Decree requirements so EPA agrees with this comment and has revised the Condition IV.H.4 title to "West Side Beavon Unit (aka tail gas unit)." Since Condition IV.H.1 is deleted, Condition IV.H.4 now becomes Condition IV.H.3.

Comment No. 57.
In Condition IV.H.4, NOX, PM, PM10 and PM2.5 come only from the RGG heater(H-1061) and should be calculated based on Condition IV.D.2 and IV.D.3, not the method in Condition IV.H.4. The heater is routed through the Beavon stack (T-1061).

Response 57
Based on the review of Condition IV.H.4 and Appendix B-7, EPA agrees that the equation described in Condition IV.H.4 will only apply to the calculation of CO and VOC from the Beavon Unit. The PAL application did not state that the source of NOx, PM, PM10 and PM2.5 emissions from the Beavon Unit was the RGG Heater (H-1061) which vents through the Beavon stack. Pursuant to Limetree's clarification, EPA has adjusted the language in Condition IV.H.4 (now IV.H.3) to make clear that emissions of NOx, PM, PM10, PM will be calculated based on Conditions IV.D.2 and IV.D.3, which are the permit conditions for heaters.

Comment No. 58.
In the equation provided in this condition of the draft PAL permit, Limetree Bay requests the term "tail gas maximum rate" be renamed as "tail gas flow rate" to clarify that it is the actual value, not the maximum design value, that is used to calculate actual emissions.

Response 58
EPA agrees with this comment because Condition I of the PAL permit requires the summing of "actual emissions of each emission unit" at the facility. Thus, the emissions at this unit should be based on the amount of flow during the period when the unit operated (the tail gas' actual flow rate) rather than the maximum flow rate. EPA revised the equation in Condition IV.H.4 to reflect "tail gas flow rate."

Comment No. 59.
The first sentence of Condition IV.H.5. of the draft PAL permit would require that Limetree Bay "monitor … drift loss factor." This requirement must be deleted, both because it is not technically feasible and because, even if it were technically feasible, it would conflict with the second sentence of this condition of the draft PAL permit, which provides that Limetree Bay "shall assume drift at 0.005% of the flow rate" for purposes of calculating emissions.

Response 59
EPA agrees with the comment that since this permit condition contains an equation that already assumes a drift loss factor of 0.005%, it is unnecessary to require monitoring of the drift loss factor. Limetree used the same equation in the baseline actual emissions calculation with the 0.005% drift loss factor which EPA relied upon to establish the PAL. It is appropriate to use the same assumption (i.e., drift loss factor) to determine compliance with the PAL. EPA revised Condition IV.H.5 to delete the drift loss monitoring requirement but retained the 0.005% flow rate assumption. Condition IV.H.5. has become IV.H.4.

Comment No. 60.
Condition IV.H.6. of the draft PAL permit would require that Limetree Bay monitor the hours of venting from the sulfur pits and provides an equation to be used for calculating emissions. Limetree Bay requests two clarifications in this condition of the draft PAL permit. First, the condition should be revised to clarify that the monitoring and calculation are required only for periods of direct venting to atmosphere from a sulfur pit, not to those periods when the exhaust from a sulfur pit is routed back into the process. Second, Limetree Bay requests the term "maximum venting" be renamed as "direct venting hours" to clarify that it is the actual number of hours of venting during a year, not the maximum number of hours in a year, that is used to calculate actual emissions.

Response 60
EPA agrees that the equation is not applicable to hours when the exhaust from all sulfur pits are routed back into the process because there will be no emissions of PM, PM10 and PM2.5 at those times. EPA has revised Condition IV.H.6. to require monitoring only for periods of direct venting to the atmosphere. We are also changing the language "MV=Maximum Venting" to "DV= Direct Venting Hours per year/pit. Condition IV.H.6 has become IV.H.5.

Comment No. 61.
Table L-2 is incorrect. There are two sulfur pits on the East Side (one each for SRUs 3 and 4) and one on the West (SRUs 1 and 2). There should be a single column in the Table for SRUs 1 and 2. See revised Table L-2, below, with changes indicated in red font. (Table L-2 not included here)

Response 61
Table L-2 provides an emission factor for each sulfur pit that is associated with an SRU. The draft PAL permit contains four emission factors, one for SRUs 1, 2, 3, and 4; respectively. Limetree commented that this table is incorrect because the facility only has one sulfur pit for SRUs 1 and 2 (West Side) and two sulfur pits for SRUs 3 and 4 (East Side). EPA reviewed Table B-8 of Appendix B of the PAL permit application again and confirmed that there is only one sulfur pit on the West Side (SRUs 1 and 2). Therefore, EPA agrees with the comment that only

one emission factor is needed for SRUs 1 and 2. EPA revised Table L-2 to address this concern and renamed it as Table IV-H-1.

Comment No. 62.
Condition IV.I.2. of the draft PAL permit would require that Limetree Bay calculate actual emissions of SO2, CO, and VOC from each Platformer catalyst regeneration vent based on each unit's design capacity, prescribed emission factors, and "weekly hours of utilization." This condition of the draft PAL permit must be revised in order to remove ambiguity, to resolve internal inconsistencies, and to provide for accurate determination of actual emissions. Specifically, the reference to "weekly hours of utilization" must be revised to "annual hours of venting," because the prescribed emission factors are representative of only the infrequent and brief periods of venting during catalyst regeneration events (typically once every 2 years), not all periods of Platformer unit operation. In addition, the "Operating Hours" term in the prescribed equations must be revised in the same fashion and for the same reason.

Response 62
Section 6.3.4.6 (Platformer Vents) of the PAL application describes the emission calculation procedures for Platformer Vents while Table B-12 of Appendix B of the PAL application provides PTE calculations. These sections of the PAL permit did not specify whether the platformer vents were associated with catalyst regeneration, were continuous vents, or release emissions frequently. As such, the draft permit requires monitoring of weekly hours of utilization. Since Limetree clarifies that the vents are for catalyst regeneration, EPA agrees that the unit operation would not be continuous, and emissions would be infrequent. EPA therefore revised Condition IV.I.2 from "weekly hours of utilization" to "annual hours of venting" for purposes of calculation and also revised Condition IV.I.1 to require monitoring whenever the platformers are vented.

Comment No. 63.
Condition IV.J.2. of the draft PAL permit and Table N should be deleted in their entirety, as they are redundant; the sulfuric acid plant heaters are refinery fuel gas-fired process heaters (H-7801, H-7802, and R-7801, which vent through a common stack STK-7801) that are also covered by Conditions IV.D.2. and IV.D.3. using the factors in Table E. In the alternative, if this condition and Table N are not deleted, they must be revised in several respects. Fir st, it must be clarified that Conditions IV.D.2. and IV.D.3. of the draft PAL permit do not apply with respect to the heaters. Second, all references to the use of the emission factors in Table N of the draft PAL permit to calculate emissions from the heaters must be deleted, as these factors are not in any way representative of actual emissions from the sulfuric acid plant heaters. (Incidentally, the emission rates shown in Table N of the draft PAL permit are the emission rates measured at the sulfuric acid plant process stack during a performance test conducted in May 1998.)

Response 63
EPA developed Condition IV.J.2 based on its review of Section 6.3.4.7 and Table 1 of the Appendix B-13 of the PAL permit application, which was not explicit regarding how the heaters' emissions and the process emissions are routed. EPA did not include in Condition IV.D. the process heaters (H-7801, H-7802 and R-7801 and vented through STK 7801) but intended to include those heaters in Condition IV.J.2. Based on Limetree clarification, the sulfuric acid plant heaters are process heaters that fire fuel gas; as such, they are covered under Conditions IV.D.2 and 3 as well as Table E. Therefore, to avoid redundancy, EPA agrees that Condition IV.J.2 and

Table N can be deleted. EPA revised Table M-1 (now Table IV-J-1) to indicate the stack (STK-7802) to which the sulfuric acid process emissions – SO2 - are vented. EPA also revised Condition IV.J.1 to add requirements that the emissions from these heaters shall be calculated based on the default emission factors in Table E of Condition IV.D. It should be noted that Table E has been renamed as Table IV-D-3.

Comment No. 64.
Condition IV.L.1. of the draft PAL permit must be revised to provide for monitoring in accordance with either 40 CFR §§ 60.592 or 60.592a. Requiring adherence to the less stringent monitoring requirements of 40 CFR § 60.592 for a process unit that is subject to 40 CFR § 60.592a would be arbitrary, capricious, and inappropriate.

Response 64
EPA inadvertently omitted reference to 40 CFR § 60.592a. Condition IV.L.1 of the draft permit requires monitoring of process fugitive emissions in accordance with 40 CFR § 60.592. However, since this condition covers different process equipment that could be subject to either 40 CFR § 60.592 or § 60.592a, EPA agrees with Limetree that both of these NSPS requirements need to be listed in Condition IV.L.1. EPA therefore revised Condition IV.L.1 to require compliance with 40 CFR § 60.592 for process equipment subject to 40 CFR Part 60, Subpart GGG and with § 60.592a for process equipment subject to 40 CFR Part 60, Subpart GGGa.

Comment No. 65.
Conditions IV.L.2. and IV.L.3. of the draft PAL permit must be revised to clarify that these provisions are not applicable to compressor seals or other equipment equipped with a closed vent system to capture and route emissions from leaks to a process or fuel gas system or to a flare or other control device, consistent with 40 CFR §§ 60.592a, 60.482-4a(c), and 60.482-3a(h).

Response 65
Conditions IV.L.2. and IV.L.3. apply to process fugitive emissions. EPA understands that fugitive emissions are emissions that are not captured or routed back to the process or are emitted from sealed equipment. Therefore, EPA has revised Condition IV.L.2 as requested by Limetree to include reference to 40 CFR §§ 60.592a, 60.482-4a(c), and 60.482-3a(h). Revision to Condition IV.L.3 is not necessary because it refers back to Condition IV.L.2.

Comment No. 66.
In order to improve clarity, Limetree Bay requests that Condition IV.L.2.b. of the draft PAL permit be revised to clarify the meaning of the term "unmonitored." Without clarification, this term could be construed as including components that are subject to instrumental monitoring requirements (i.e., "monitored components") but were not monitored during a particular time period. The term "unmonitored," as defined in the PAL permit application and as used in the draft PAL permit, includes only components that are not subject to instrumental monitoring requirements such as components in heavy liquid service and other components that are exempt from monitoring requirements.

Response 66
EPA agrees with this comment because the intent of IV.L.2 is to distinguish components that are subject to monitoring from those that are not for purposes of emissions calculations.

Comment No. 67.
Condition IV.L.3. must be revised to delete the reference to Table P and to refer instead to Condition IV.L.2. because only Condition IV.L.2. of the draft PAL permit provides the methodologies for calculating monthly emissions from monitored and unmonitored components.

Response 67
EPA has deleted Condition IV.L.3 because, in order to comply with Condition I of the PAL permit, the permittee must determine monthly emissions from emission units addressed in Condition II.L. EPA also renamed Table P as Table IV-L-1.

Comment No. 68.
In the fourth row of Table P of the draft PAL permit, the emission factor for VOC from valves in heavy liquid service must be changed to 0.0005 lb/hr/component. This is consistent with the emission factor used to calculate baseline actual emissions from equipment leaks and to establish the PAL for VOC, and with U.S. EPA's most current Protocol for Equipment Leak Emission Estimates published emission factor. In addition, in the eighth row of this table, the control efficiency for connectors in heavy liquid service should be 0% rather than 30%.

Response 68
This is a typographical error. EPA corrected the emission factor for valves in heavy liquid service from 0.005% to 0.0005% and the connectors' control efficiency from 30% to 0%.

Comment No. 69.
The first sentence of Condition IV.M.1. of the draft PAL permit must be revised to clarify that the requirements for monitoring of "process drains and junction boxes within the Oily Wastewater Collection System" are separate and distinct from the requirements for monitoring of "variable parameter input data including but not limited to stream flows and compositions for the Advance Wastewater Treatment Plant." The former requirements relate only to process drains, for which emissions will be calculated in accordance with Condition IV.M.2. The latter requirements relate only to emissions from the Advanced Wastewater Treatment Plant, for which emissions will be calculated in accordance with Conditions IV.M.3. and IV.M.4. As written, this draft permit condition could be construed to suggest that the "variable parameter input data" are among the items that must be visually inspected.

Response 69
EPA intended Condition IV.M.1 to have two separate requirements for monitoring – one for the oily wastewater collection system and the other for the Advanced Wastewater Treatment Plant – because they are very different systems. In order to provide clarification sought by this comment, EPA changed Condition IV.M.1 so that the requirements for the oily wastewater system and the Advanced Wastewater Treatment Plant are clearly separate.

Comment No. 70.
Condition IV.M.1. of the draft PAL permit would require weekly and monthly observations and monitoring. Both references should be removed and replaced with monitoring in accordance with NESHAP Subpart FF, in accordance with the frequencies specified in 40 CFR §§ 61.346-354. The PAL does not necessitate imposing redundant monitoring in order to ensure compliance with the PAL and monitoring in accordance with NESHAP Subpart FF is adequate to demonstrate compliance.

Response 70
EPA authority under the PAL provisions of 40 CFR § 52.21 are not limited to the requirements in the NESHAP. Limetree is subject to the NESHAP Subpart FF monitoring frequency requirements for the wastewater area of the plant in addition to the PAL permit requirements. Although the draft PAL permit did not include reference to NESHAP Subpart FF, compliance with either NESHAP Subpart FF or the language in the draft permit would provide sufficient monitoring of the oily wastewater collection system and treatment plant. Therefore, EPA agrees with the comment to impose the NESHAP Subpart FF requirements instead of the monitoring requirements in Condition IV.M.1 of the draft PAL permit for monitoring this wastewater processing and treatment area. EPA revised Condition IV.M.1 to require compliance with the monitoring provisions of NESHAP Subpart FF and deleted the original language.

Comment No. 71.
Conditions IV.M.2. and IV.M.3. of the draft PAL permit would require that Limetree Bay determine fugitive VOC emissions from certain equipment and activities associated with wastewater treatment. Limetree Bay suggests deleting the word "fugitive" from each of these conditions of the draft PAL permit in order to clarify that all emissions, including both fugitive and non-fugitive, must be quantified.

Response 71
EPA agrees with this comment that clarification is needed to ensure that both fugitive and non-fugitive VOC emissions from wastewater area activities need to be determined. As Conditions IV.M.3 and IV.M.4 (commenter mistakenly pointed to Conditions IV.M.2 and IV.M.3) are written in the draft permit, they might imply that only fugitive emissions need to be determined. EPA revised Conditions IV.M.3. and IV.M.4. to address this comment by deleting the word "fugitive" as appropriate.

Comment No. 72.
Condition IV.O.1. of the draft PAL permit must be revised to clarify that monitoring of vapor pressure and molecular weight of materials loaded and monitoring of ambient conditions are required only if Limetree Bay elects to calculate VOC emissions from the marine loading operations using a method other than the default emission factors in Table Q as provided by Condition IV.O.2. In addition, Condition IV.O.1. of the draft PAL permit must be revised to clarify that Limetree Bay can use vapor pressure and molecular weight data for materials loaded based on Safety Data Sheets rather than on-site sampling and analysis.

Response 72
Based on the review of the pertinent Section 6.3.4.12 (Marine Loading) of the PAL application that provides the calculation procedures for the emissions from this area and Table B-20 of the Appendix B of the permit application, EPA agrees with this comment that vapor pressure and molecular weight data in Condition IV.O.1 are only needed if the permittee chooses to calculate emissions based on the first option provided in Condition IV.O.2, specifically, using the procedures outlined in Chapter 5.2 of AP-42. If the more representative option is the second option in Condition IV.O.2, using the default emission factors in Table Q (renamed as "Table IV-O-1"), then the permittee would need to monitor and record the throughput in gallons from the loading area and use that amount in calculating the VOC emissions. EPA also agrees with the comment that if the first option is more representative, vapor pressure and molecular weight

data from the Material Safety Data Sheet would be an acceptable practice for obtaining these data. It would not be necessary for Limetree to repeat similar sampling and analysis on-site to obtain such data. EPA revised Condition IV.O.1 accordingly.

Comment No. 73.
To the extent that the second sentence of Condition IV.O.2. of the draft PAL permit would require supersession of the predictive emission factor equations used to determine baseline actual VOC emissions and to establish the VOC PAL listed in Table A of the draft PAL permit, it is inappropriate because it would create arbitrary inconsistencies between the calculation methods used to establish the VOC PAL and those used for compliance demonstration. If, in the context of periodic review of information it publishes in AP-42 or otherwise, EPA determines that one of the predictive emission factor equations used to establish the VOC PAL in the PAL permit issued to Limetree Bay is erroneous, this must be addressed through the process established by 40 CFR § 52.21(aa)(8)(ii)(*a*)(*1*). Accordingly, the second sentence of Condition IV.O.2. of the draft PAL permit must be omitted from the final permit.

Response 73
EPA agrees with the comment that the AP-42-based procedures and emission factors that Limetree used in calculating the baseline actual emissions to establish the PAL should continue to be used in calculating the future emissions for compliance with the PAL. The permittee will not be required to use the revised AP-42 procedures or factors for emission calculations to demonstrate compliance unless the permit is reopened under 40 CFR § 52.21(aa)(8)(ii)(*a*)(*1*) to revise the PAL to include the new emission factor. See also EPA Response to Comments 6b and 6c and the general conditions added to the permit in Sections II.M and II.N. EPA deleted the second sentence of Condition IV.O.2 to eliminate the requirement to use the most recent edition of the AP-42.

Comment No. 74.
Condition IV.O.4. of the draft PAL permit must be revised to allow for use of the best, most current data available, such as unit-specific emission factors based on unit-specific performance testing.

Response 74
Condition IV.O.4 (now IV.O.3) pertains to thermal oxidizer emission calculations. Since the oxidizer is a new unit and did not exist during the baseline years, it is normal practice for the Permittee to use the manufacturer's provided equation and emission factors to initially calculate the VOC PTE emissions as Limetree did in this case. However, it would also be appropriate for the permittee to develop a unit-specific emission factor based on the best and most current data available after the thermal oxidizer begins operation as Limetree commented here. A unit-specific factor will be more representative of the unit's actual emissions. Therefore, EPA revised Condition IV.O.4 (now IV.O.3) to provide this option.

Comment No. 75.
In condition IV.O.4., the equation term "GL" should be corrected to units of thousand gallons per day (Mgal) for the units in the proposed equation to balance.

Response 75
While using the term "GL" (gallons) to determine VOC emissions is not incorrect, EPA agrees that using Mgal (thousand gallons) would help balance the equation without further conversion. Therefore, EPA changed "GL" to "Mgal" in the equation in Condition IV.O.4. (Now IV.O.3)

Comment No. 76.
The equation provided in Condition IV.O.4 allows for the calculation of NOx, CO, PM, PM10, PM2.5 and SO2 emissions from the thermal oxidizer, the condition needs to be revised, to incorporate the appropriate equation for VOC emissions.

Response 76
EPA reviewed this comment and the Appendix B of the PAL application and agrees that an equation for VOC emission calculation needs to be added because it was inadvertently omitted from the draft permit. The equation for calculating the emissions for other pollutants in Condition IV.O.4 (now IV.O.3) remains unchanged.

Comment No. 77.
Condition IV.P.1. would require moisture content monitoring for Coke, Sulfur and FCC Catalyst and any other solids handling on a weekly basis. Based on process knowledge Limetree Bay believes that monthly monitoring should be sufficient to accurately estimate emissions of particulates from these activities, and requests condition IV.P.1. to remove the requirement for weekly monitoring, which will be unduly burdensome.

Response 77
EPA reviewed the PM PTE from this area as provided in Appendix B (B-21, B-22 and B-23) of the PAL application and notes that the PM emissions from this solids handling area is a small fraction of the total PM since this activity occurs only on an as-needed basis. Therefore, EPA finds it acceptable to monitor the moisture content from the material handling area on a monthly basis. EPA revised Condition IV.P.1 to change weekly monitoring to monthly monitoring for the moisture content.

Comment No. 78.
Condition IV.P.1. would require monitoring of moisture content, pile areas and wind speed, which are needed to calculate emissions using the equations in AP-42, Chapter 13.2, even though Condition IV.P.2. allows use of the default emission factors in Tables R, S & T. We request that Condition IV.P.1. be amended so that Permittee is not required to collect this information if it does not rely on the equations in AP-42, Chapter 13.2.

Response 78
Condition IV.P. – Material Handling - gives an option to Limetree to either use AP-42 method or the default emission factors. If Limetree uses the default emission factors provided in the PAL permit, there is no need to monitor moisture content, pile areas or wind speed. Monitoring of these parameters is only required if Limetree were to use the equations outlined in AP-42, Volume I, Chapter 13.2. EPA agrees that Condition IV.P.1 needs clarification on the requirements of these monitoring choices. EPA revised Condition IV.P.1 accordingly.

Comment No. 79.
Condition IV.P.2. of the draft PAL permit must be revised to allow the use of the emission factor and control efficiency used to calculate baseline actual emissions of PM, PM10, and PM2.5 from wind erosion at the sulfur stockpiles to establish the PALs for these pollutants listed in Table A of the draft PAL permit. As referenced in Appendix B-21 of the PAL permit application, the emission factor for sulfur stockpiles is 3.5 lbs per acre per day and the control efficiency is 30 to 50 percent, based upon data provided in *Development of Emission Factors for Fugitive Dust Sources* (EPA-450/3-74-037), U.S. EPA, June 1974, and CHEER (Coal Handling Emissions Evaluation Roundtable) Workshop, TNRCC (May 16, 1995). If EPA has determined that this emission calculation methodology is not acceptable, the PALs listed in Table A of the draft PAL permit must be revised to reflect the emission calculation methodology prescribed by EPA.

Response 79
EPA agrees that the methodology used in calculating the baseline actual emissions and establishing the PAL should be used to demonstrate compliance with the PAL in this case. EPA confirmed that the uncontrolled emission factor and the corresponding control efficiency and wind erosion loss used to calculate baseline actual emissions of PM, PM10, and PM2.5 at the sulfur stockpiles and to establish the PAL for these pollutants were listed in Appendix B-21 of the PAL application as 3.5 lbs/acre/day and 30-50%, respectively. Based on EPA's review of Appendix B-21 of the PAL application which lists the PTE for all pollutants, the calculation method and the emission factor/control efficiency used for the baseline particulate emissions calculations were based on the publication referenced in this comment. Therefore, EPA agrees that these references: 1) Development of emission Factors for Fugitive Dust Sources (*Sources* (EPA-450/3-74-037), U.S. EPA, June 1974; and 2) Coal Handling Emissions Evaluation Roundtable (CHEER) Workshop, TNRCC (May 16, 1995) should be added as alternative methods for the calculation of PM, PM10 and PM2.5 emissions associated with the handling of Coke, Sulfur and FCC catalyst in Condition IV.P.2. EPA revised Condition IV.P.2 to allow the use of those data to be consistent with Limetree's method in estimating the baseline emissions.

Comment No. 80.
Condition IV.P.2. of the draft PAL permit must be revised to allow the use of the control efficiency used to calculate baseline actual emissions of PM, PM10, and PM2.5 from sulfur conveyors and to establish the PALs for these pollutants listed in Table A of the draft PAL permit. As referenced in Appendix B-21 of the PAL permit application, the control efficiency for rain covers on conveyors is 50 percent, based upon data provided in CHEER (Coal Handling Emissions Evaluation Roundtable) Workshop, TNRCC (May 16, 1995). If EPA has determined that this emission calculation methodology is not acceptable, the PALs listed in Table A of the draft PAL permit must be revised to reflect the emission calculation methodology prescribed by EPA.

Response 80
EPA agrees that the methodology used in calculating the baseline actual emissions and establishing the PAL should be used to demonstrate compliance with the PAL in this case. EPA confirmed that the control efficiency used to calculate the baseline actual and PTE emissions of PM, PM10, and PM2.5 for the rain covers on sulfur conveyors and to establish the PAL for these pollutants was listed in Appendix B-21 of the PAL application as 50%. Based on the review of the calculation method and the emission factor/control efficiency used for the PTE and the baseline particulate emissions calculations (Appendix B-21), EPA revised Condition IV.P.2 to

allow the use of those data to be consistent with Limetree's method in estimating the baseline emissions.

Comment No. 81.
Condition IV.P.2. of the draft PAL permit must be revised to allow the use of the control efficiency used to calculate baseline actual emissions of PM, PM10, and PM2.5 from coke conveyors and to establish the PALs for these pollutants listed in Table A of the draft PAL permit. As referenced in Appendix B-22 of the PAL permit application, the control efficiency for full enclosures is 90 percent, based upon data provided in CHEER (Coal Handling Emissions Evaluation Roundtable) Workshop, TNRCC (May 16, 1995). If EPA has determined that this emission calculation methodology is not acceptable, the PALs listed in Table A of the draft PAL permit must be revised to reflect the emission calculation methodology prescribed by EPA.

Response 81
EPA agrees that the methodology used in calculating the baseline actual emissions and establishing the PAL should be used to demonstrate compliance with the PAL in this case. EPA confirmed that the control efficiency used to calculate baseline actual emissions of PM, PM10, and PM2.5 from coke conveyors with full enclosures and to establish the PALs for these pollutants was listed in Appendix B-22 of the PAL application as 90%. Based on the review of the calculation method and the emission factor/control efficiency used for the PTE and the baseline particulate emissions calculations (Appendix B-22), EPA revised Condition IV.P.2 to allow the use of those data to be consistent with Limetree's method in estimating the baseline emissions.

Comment No. 82.
Condition IV.P.2. of the draft PAL permit must be revised to allow the use of an emission factor based on exhaust gas flow and concentration to calculate emissions of PM, PM10, and PM2.5 from dust collectors associated with coke handling operations, consistent with the approach used to calculate baseline actual emissions of and to establish the PALs for these pollutants listed in Table A of the draft PAL permit. As referenced in Appendix B-22 of the PAL permit application, the assumed exhaust gas concentration for the dust collectors currently in place is 0.005 grains per dry standard cubic foot of exhaust. If EPA has determined that this emission calculation methodology is not acceptable, the PALs listed in Table A of the draft PAL permit must be revised to reflect the emission calculation methodology prescribed by EPA.

Response 82
EPA agrees that the methodology used in calculating the baseline actual emissions and establishing the PAL should be used to demonstrate compliance with the PAL in this case. EPA reviewed Appendix B-22 of the PAL application and confirmed that the emission factor used to calculate the emissions of and to establish the PALs for PM, PM10, and PM2.5 from dust collectors associated with coke handling operations was 0.005 grains per dry standard cubic foot of exhaust gas. Based on EPA's review of the calculation method and the emission factor/control efficiency used for the PTE and the baseline particulate emissions calculations as they appear in Appendix B-22, EPA agrees to include in Table S (which EPA renamed as Table IV-P-2) 0.005 grains per dry standard cubic foot of exhaust gas as the emission factor for the dust collectors. EPA revised Condition IV.P.2 to allow the use of those data to be consistent with Limetree's method in estimating the baseline emissions.

Comment No. 83.
To the extent that the third sentence of Condition IV.P.2. of the draft PAL permit would require supersession of the predictive emission factor equations used to determine baseline actual emissions and to establish a PAL listed in Table A of the draft PAL permit, it is inappropriate because it would create arbitrary inconsistencies between the calculation methods used to establish the PALs and those used for compliance demonstration. If, in the context of periodic review of information it publishes in AP-42 or otherwise, EPA determines that one of the predictive emission factor equations used to establish a PAL in the PAL permit issued to Limetree Bay is erroneous, this must be addressed through the process established by 40 CFR § 52.21(aa)(8)(ii)(*a*)(*1*). Accordingly, the third sentence of Condition IV.P.2. of the draft PAL permit must be omitted from the final permit.

Response 83
EPA agrees that procedures and factors based on AP-42 that Limetree used for calculating the baseline actual emissions on which the PAL was based should generally continue to be used in calculating the future emissions for demonstrating compliance with the PAL. Updated AP-42 procedures or factors should only be required via the process stipulated in 40 CFR § 52.21(aa)(8)(ii)(*a*)(*1*) and Condition II.N of this permit. See also EPA Response to Comments 6b and 6c and the general conditions added to the permit in Conditions II.M and II.N. EPA revised Condition IV.P.2 by deleting the sentence beginning with "In the event that the methodology in AP-42 is superseded…"

Comment No. 84.
Table S of Condition IV.P. the draft PAL permit should specify a control efficiency of 50 percent, rather than 75 percent, for the dropping of coke into ships, consistent with the emission calculation methodology used to determine baseline actual emissions and to establish the PALs listed in Table A of the draft PAL permit. The 75 percent control efficiency listed in the second row of Table S of the draft PAL permit is correct with respect to the other coke handling activities listed in that row.

Response 84
EPA did not differentiate dropping of coke into ships from the other coke handling activities when establishing a 75% control efficiency requirement in Table S. Based on Limetree's comment, and a review of the PAL application, a 50% control efficiency (as opposed to 75%) was used in calculating the baseline actual emissions and establishing the PAL for this activity. Therefore, EPA agrees with this comment that the same control efficiency should be used in demonstrating compliance with the PAL. EPA revised the control efficiency for coke dropping into the ships from 75 to 50 percent in Table S and renamed it "Table IV-P-2."

Comment No. 85.
Condition IV.Q.1. of the draft PAL permit must be revised to clarify that only the vehicles owned or leased by Limetree Bay and operated on the premises, rather than all vehicles "at the source," are subject to the requirement for monitoring of mileage. Vehicles other than those owned or leased by Limetree Bay, such as supplier delivery trucks and vehicles operated by consultants, are not a part of the Limetree Bay stationary source, as that term is defined at 40 CFR §§ 52.21(b)(5)-(6), both because they are not in the same industrial grouping as Limetree Bay and because they are neither under the control of Limetree Bay nor under the control of persons under common control with Limetree Bay. In addition, even if vehicles other

than those owned or leased by Limetree Bay were considered to be a part of the Limetree Bay stationary source, the fugitive emissions from operation of those vehicles would not be quantifiable and thus would not be counted pursuant to 40 CFR § 52.21(aa)(4)(i)(*d*).

Response 85
The comment has highlighted for EPA some ambiguity in the draft permit. EPA intended that only the vehicles owned or leased by Limetree should be subject to the requirement in Condition IV.Q.1 although it was not explicitly noted in the draft permit. Therefore, without opining on the commenter's view of 40 CFR § 52.21, EPA agrees to revise Condition IV.Q.1. to make our intention clear by applying the requirement in the condition only to vehicles owned or leased by the Permittee.

Comment No. 86.
To the extent that the second sentence of Condition IV.Q.2. of the draft PAL permit would require supersession of the predictive emission factor equations used to determine baseline actual emissions and to establish a PAL listed in Table A of the draft PAL permit, it is inappropriate because it would create arbitrary inconsistencies between the calculation methods used to establish the PALs and those used for compliance demonstration. If, in the context of periodic review of information it publishes in AP-42 or otherwise, EPA determines that one of the predictive emission factor equations used to establish a PAL in the PAL permit issued to Limetree Bay is erroneous, this must be addressed through the process established by 40 CFR § 52.21(aa)(8)(ii)(*a*)(*1*). Accordingly, the second sentence of Condition IV.Q.2. of the draft PAL permit must be omitted from the final permit.

Response 86
EPA agrees with the comment that the procedures and factors based on AP-42 that Limetree used for calculating the baseline actual emissions on which the PAL was based should continue to be used in calculating the future emissions for demonstrating compliance with the PAL. Updated AP-42 procedures or factors should only be required via the process stipulated in 40 CFR § 52.21(aa)(8)(ii)(*a*)(*1*) and Condition II.N of this permit. Therefore, EPA has deleted the second sentence of Condition IV.Q.2.

Comment No. 87.
Condition IV.R.1. must be revised to resolve the following issues. Limetree Bay may not be able to obtain ingredients for a paint or thinner, because vendor specifications may be proprietary. In any event, only the VOC specification is relevant for calculating VOC emissions. Thus, "and ingredients" in Condition IV.R.1. should be replaced with "VOC content."

Response 87
The requirement for Limetree to monitor and record the amount of VOC emissions from paints or thinners was EPA's intention in Condition IV.R.1 of the draft permit. Requiring Limetree to monitor the "ingredients" of the paint and thinners as opposed to "VOC content" was an inadvertent error since ingredients in a paint/thinner can be regarded as proprietary. In addition, knowing the ingredients in the paints or thinners does not automatically reveal their VOC contents which are the data needed to calculate the associated VOC emissions. Therefore, EPA agrees with this comment that the VOC content of the paint or thinner is the parameter needed to calculate the VOC emissions rather than the general term "ingredients." EPA revised the condition to replace "ingredients" with "VOC content" in Condition IV.R.1.

Comment No. 88.
Conditions IV.R.1. and IV.R.2. require the Permittee to record container size, number of containers, paint or thinner type and ingredients. Emissions from painting constitute a tiny fraction of VOC emissions from the source-approximately 0.1% of the VOC PAL. Accordingly, a lower degree of accuracy in determining emissions from the source does not materially affect the overall accuracy of the monitoring proposed nor is it likely to affect compliance with the PALs in any material fashion. There are hundreds of paint containers present in the facility, numerous small or larger paint jobs and requiring tracking for each of these paint containers and paint jobs is a burdensome task given the level of emissions this emissions source represents.

We request that the following be added to Condition IV.R.3 (as depicted in red font), which we believe is authorized by 40 CFR § 52.21(aa)(12)(i)(*c*) (allowing alternate monitoring approaches), 40 CFR § 52.21(aa)(12)(vii) (allowing use another method to determine emissions if no monitoring data is available) and 40 CFR § 52.21(aa)(8)(A) (establish default values where the correlation between a monitored value and a PAL pollutant rate cannot be established):
The Permittee shall calculate the VOC emissions from painting performed at the source monthly by summing up the amount of VOC contained within the paints and thinners that are consumed. In lieu of using consumed paint, the Permittee may use the amount of paint issued by the warehouse to calculate VOC emissions from painting performed at the source.

Response 88
EPA agrees with this comment that tracking the amount of paint used from each paint container in the facility during each paint job is a burdensome task given the level of emissions (mainly in the form of fugitives) from this activity compared with the VOC PAL. Limetree proposes to monitor the number of paint containers provided by its warehouse to calculate the VOC emissions from painting performed at the facility. EPA finds Limetree's proposed alternative method for monitoring VOC emissions from painting reasonable and acceptable. However, the language proposed by Limetree is insufficient as an enforceable permit condition because the requirements on when and how VOC emissions from the paints and thinners must be calculated need to be specified. EPA revised Condition IV.R.3. as follows: The Permittee shall calculate the VOC emissions from painting performed at the source monthly by summing the amount of VOC contained within the paints and thinners that are consumed. In lieu of using consumed paint, the Permittee may use the total amount of paint and/or thinner containers issued by the warehouse and all other paint and/or thinner distribution location at the source to calculate VOC emissions from painting performed at the source assuming all emissions occur upon a container's issuance in that month.

Comment No. 89.
The last sentence of Condition IV.S.2. is not correct, since VOC does not result from fuel combustion. Condition IV.S.2. should be revised as follows:

"The Permittee shall calculate the SO2, NOx, CO, PM, and VOC emissions from fire training by using the emission factors published in "Calculation Methods for Criteria Air Pollutant Emission Inventories," Brooks Air Force Base, TX, July 1994. The VOC attributable to the quantity of FireFOAM used shall be added to the amount of VOC resulting from fuel combustion released from the fuel being used in fire training."

Response 89
EPA agrees with the comment that VOC emissions do not occur from combustion during the Fire Drills/Training but just from the fuels being used during the training. EPA has therefore revised Condition IV.S.2. as follows: “The Permittee shall calculate the SO2, NOx, CO, PM, and VOC emissions from fire training by using the emission factors published in "Calculation Methods for Criteria Air Pollutant Emission Inventories," Brooks Air Force Base, TX, July 1994. The VOC attributable to the quantity of FireFOAM used shall be added to the amount of VOC released from the fuel being used during fire training.”

Comments from Limetree Bay Refining and Limetree Bay Terminals –
Section V – Testing
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Comment No. 90.
Condition V. of the draft PAL permit provides as follows:
"The Permittee shall conduct stack tests to determine unit-specific emission factor(s) for the process/emission units listed in Table W within 180 days of the effective date of this permit for the major emission units. For new and modified major emissions units, the stack test shall be conducted within 180 days after startup. A major emissions unit, as defined in 40 CFR § 52.21(aa)(2)(iv), is any emissions unit that has the potential to emit 100 tons per year or more of any PALs pollutant which includes but is not limited to those listed in Table W. The stack tests shall be conducted to establish the unit-specific emission factors as stated in Table W. These emission factors shall supersede any factor that was developed prior to the effective date of this permit." Condition V., including Table W, of the draft PAL permit must be revised in several respects in order to remove ambiguity, resolve internal inconsistencies, and to ensure the requirements of the underlying rule regarding error correction at 40 CFR § 52.21(aa)(8)(ii)(1) are not circumvented, as set forth below in Comments #91-99.

Response 90
No response is needed to address this comment since it merely asks EPA to review Comments 91 to 99.

Comment No. 91
The deadline for testing in the first sentence must be changed to six months after issuance of the PAL permit, consistent with Condition III.A.3.c. of the draft PAL permit and the underlying regulation at 40 CFR § 52.21(aa)(12)(vi)(*c*).

Response 91
Commenter is correct that 40 CFR § 52.21(aa)(12)(vi)(*c*) requires site-specific emission factor validation testing within 6 months of PAL permit issuance. EPA incorporated this requirement into the PAL permit via Condition III.A.3.c which states that validation testing would be performed within 6 months of the PAL permit issuance. In order to be consistent with testing time-line requirements in the other parts of this permit, EPA agrees with this comment to revise the deadline for testing requirement from "within 180 days" to "within 6 months" as stated in Condition III.A.3.c of the draft PAL permit. EPA revised the first sentence of Condition V accordingly.

Comment No. 92.
The second sentence of this condition of the draft PAL permit must be revised to clarify that only new and modified major emissions units listed in Table W will be subject to stack testing requirements, and only with respect to the PAL pollutant for which the emissions unit is classified as "major."

Response 92
EPA requires that any emission unit - an existing, a modified or a new unit with a major source PTE will need to be tested to verify the emission factors used in establishing and complying with the PAL. The stack testing requirement is not limited to a modified or new emission unit but to each emission unit classified as "major" for the PAL pollutant(s) it emits. EPA revised Condition V so that the first sentence applies to the existing units listed in the Table in Condition V and the sentence referenced in the comment applies to new and modified units.

Comment No. 93.
The second sentence of this condition of the draft PAL permit must also be revised to clarify the meaning of the term "modified," as this term is not defined in the underlying PSD regulation at 40 CFR § 52.21.

Response 93
EPA hereby clarifies that the term "modified" with reference to the testing requirements in Condition V means any change at an existing emission unit that will result in a change to the emission factor being used to calculate the emissions of a PAL pollutant.

Comment No. 94.
This condition of the draft PAL permit must be revised to clarify the meanings of the terms "determine" and "establish" in the context of emission factors developed pursuant to this condition, to clarify the purposes for which previously established emission factors are superseded and the timing of such supersession.

Response 94
For consistency, the term "establish" is deleted and replaced with "determine" in the revised Condition V. However, EPA has not added a definition of the term "determine' because the term speaks for itself. The timing of the test has been clarified (See EPA Response to Conditions 91-92) and the timing of the reporting of any new emission factor is addressed in Section VII.A. Further, Condition V is changed to state that any unit-specific emission factor developed will supersede the previous emission factor from the month following the testing.

Comment No. 95.
To the extent that this condition of the draft PAL permit is intended to require supersession of (*i.e.*, to invalidate) the emission factor used to determine baseline actual emissions and to establish a PAL listed in Table A of the draft PAL permit, as amended, it must be revised to provide for reopening the permit to correct the erroneous PAL calculation as required by 40 CFR § 52.21(aa)(8)(ii)(*1*) and Condition II.H. of the draft PAL permit. See also, comments on III.A.3.c.

Response 95
EPA agrees that should any emission factor used previously to determine baseline actual emissions and establish a PAL (and listed in Table A of the PAL permit, now Table I-1) is invalidated by the validation stack testing, the PAL permit would be reopened to reflect the updated emission factor as required by 40 CFR § 52.21(aa)(8)(ii)(*1*) and Condition II.H of the draft PAL permit. EPA added a statement to Condition V to that effect. See also EPA Response to Comment 6c regarding the circumstances under which an updated emission factor will lead to reopening a PAL.

Comment No. 96.
The title of Table W should be changed to "Stack or Performance Tests Required to Develop Unit Specific Pollutant Emission Factors" to include performance testing.

Response 96
Although the terms "stack test" and "performance test" may have the same meaning and at times are used interchangeably, for clarification purposes EPA revised the title of Table W to "Performance Tests Required to Develop Unit Specific Pollutant Emission Factors" and renumbered Table was Table V-1.

Comment No. 97.
For sixteen separate emissions units, Condition V. and Table W of the draft PAL permit would require Limetree Bay to conduct stack testing for SO2 and to determine unit specific emission factors using the results of such testing. However, for each of the sixteen referenced emissions units, the method used by Limetree Bay to determine baseline actual SO2 emissions and the method proposed by Limetree Bay for determining monthly SO2 emissions during the term of the PAL permit is essentially a set of mass balance calculations: The sulfur content of each fuel is determined, such as by continuous monitoring to determine H2S concentration in refinery fuel gas or periodic laboratory analysis to determine sulfur content of fuel oil, and the calculation assumes 100 percent of sulfur is converted to SO2.

Testing to measure SO2 emissions from any of the sixteen referenced emissions units would be unduly burdensome, would provide no useful information, and thus would be arbitrary and capricious. If the purpose of the testing would be to determine the unit specific fraction of sulfur that is actually converted to SO2 (i.e., to determine an SO2 emission factor in units such as lbs SO2 per lb of sulfur in fuel combusted), that would provide no useful information because Limetree Bay has conservatively proposed to assume 100 percent conversion. If the purpose of the testing is to make a one-time measurement of SO2 emission rate (i.e., to determine an SO2 emission factor in units such as lbs SO2 per gallon of fuel oil burned), that would provide no useful information because the resulting emission factor would be inherently less accurate than the monitoring and calculation approaches proposed by Limetree Bay and required by Condition of the draft PAL permit. For these reasons, Limetree Bay requests deletion of all requirements for stack testing with respect to SO2 emissions.

Response 97
EPA agrees with Limetree's proposal to use the mass balance equation and conservatively assume 100 percent conversion of fuel sulfur to SO2 emissions because it is a more conservative method to determine SO_2 emissions than to measure SO_2 emissions via stack testing, and it is approvable under 40 CFR § 52.21(aa)(12)(i)(*c*). EPA therefore deleted the requirements for stack testing with respect to SO2 emissions in Table W (renumbered as Table V-1) and added a requirement that the permittee must use a 100% conversion of fuel sulfur to SO2.

Comment No. 98.
The third row of Table W of the draft PAL permit must be revised to correct the description provided for source IDs. H-202, C-200A and C-200C, which are depicted as "Penex – Hot Oil Heaters." This description must be revised to clarify that source ID. H-202 is a hot oil heater, while C-200A and C-200C are the unit compressor engines (i.e., stationary reciprocating internal combustion engines used to drive compressors).

Response 98
EPA reviewed the source ID descriptions in Appendix B and C of the PAL permit application and agrees with Limetree that correction is needed as described. EPA revised Table W (renumbered as Table V-1) accordingly.

Comment No. 99.
The seventeenth row of Table W of the draft PAL permit must be revised because it includes errors and groups the East and West Sulfur Recovery Plants. This row should be 1) split into two rows, to include West Sulfur Recovery Plant and the East Sulfur Recovery Plant. References to H-1031, H-4761 and Process units 1020, 1040, 4740 and 4750 from the source ID column must be deleted. Limetree Bay does not recognize source ID H-1031, no such ID exists at the facility. The East Sulfur Recovery Plant heater H-4761 has been converted to a steam heater, therefore no longer a source of air pollution. Process Units 1030, 1040, 4740 and 4750 are the facility area coding for the Sulfur Recovery Plants, and do not represent discrete stack(s) from which stack test may be conducted. Below is an updated and corrected version of Table W, with changes reflected in red font.

Response 99
Based on the clarification Limetree provided about the equipment layout and utilization in this comment, EPA agrees that correction to Table W is warranted. EPA revised Table W (renumbered as Table V-1) accordingly. Note that the commenter appears to have inadvertently referenced process unit "1020" in the third sentence of the comment instead of unit "1030." There is no process unit 1020 in Table W of the draft permit but EPA has deleted reference to process unit 1030 in the final permit.

Comment No. 100.
Under "Section VI. Records Keeping" this comment simply states – "See General Comments"

Response 100
This comment asks to review the general comments – see responses to Comments 3 to Comment 14 that are related to General Comments.

Comments from Limetree Bay Refining and Limetree Bay Terminals
Section VII – Reporting and Notifications

Comment No. 101.
Condition VII.A. (Semi-Annual Report) should align with the Title V semi-annual reports, which are submitted on August 31 (for the period January 1-June 30) and February 28 (for the period July 1-December 31) of each year.

Response 101
EPA finds it acceptable to align the reporting period of the semi-annual reports required in the PAL permit with that of the semi-annual reporting requirement specified in Condition 8.13.1 of Limetree title V permit. This change only affects when both reports are due. What must be covered in the two reports remains unchanged. This alignment will allow for more efficient use of resources at Limetree, EPA and DPNR, for compiling and reviewing the reports, respectively. In addition, this alignment will alleviate any confusion on the reporting timeframe when the PAL permit requirements are rolled into Limetree Title V permit. EPA revised Condition VII.A accordingly.

Comment No. 102.
Condition VII.A.3. must be revised to remove the reference to Section V, because Section V does not contain any "unit-specific determinations."

Response 102
EPA agrees to delete reference to Section V, and to Section IV as well, to be consistent with the language of the PAL provision at 40 CFR § 52.21(aa)(14)(i)(*c*).

Comment No. 103.
The certification required by Condition VII.A.6. and VII.B.4. should be consistent with the language in the Title V compliance certification, i.e., qualified based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Response 103
While EPA recognizes the efficiency in aligning the reporting periods of the PAL and title V permits, we also recognize that the two permits are issued under separate processes, under different legal authorities, by different permitting authorities, and for different purposes. The PAL provision at 40 CFR § 52.21(aa)(14)(i)(g) and 40 CFR § 52.21(aa)(14)(ii)(d) provide the specific language that must be included in the signed statement. This language is identical to the language included in the draft PAL permit. Therefore, EPA has not made a change to these conditions.

Comment No. 104.
Condition VII.B. of the draft PAL permit would require reporting of "any deviations or exceedance of the PAL emissions limits" within two working days.

With respect to reporting of an exceedance of a PAL, this condition of the draft PAL permit must be revised to clarify that the deadline is based on when Limetree Bay becomes aware of the exceedance. This will occur only after the calculations of monthly and rolling 12-month total emissions have been completed pursuant to Condition II.D. and Sections III. and IV. of the draft PAL permit. In addition, two-days is not a reasonable period of time. If there is an exceedance of a PAL, the company will need time to verify before reporting, and the regulations require "prompt" reporting. The Capitol Power Plant PAL permit requires reporting of PAL deviations in the Title V semi-annual compliance certifications, compared to the two days given to Limetree Bay. There is no reasonable basis to treat Limetree Bay and Capital Power differently for purposes of deviation reporting. Like Capitol Power, Limetree Bay should be able to report exceedances of limits in the PAL "promptly" in accordance with the Title V permit. (See Section 7 of the Capitol Power PAL permit, EPA-R3-PAL-001).

With respect to other deviations, such as a deviation from a monitoring requirement, like Capitol Power, Limetree Bay should be able to report deviations other than exceedances of the PAL in its Title V compliance certifications.

Response 104
The PAL provision at 40 CFR § 52.21(aa)(14)(ii) states that "deviation reports shall be submitted within the same limits prescribed by the applicable program implementing 40 CFR § 70.6(a)(3)(iii)(B)." The 2-day reporting requirement in the draft PAL permit is consistent with the deviation reporting requirements pursuant to VI Rule 206-71(5)(B)(i) to ensure that deviations resulting from emergency or upset conditions are promptly reported to DPNR. However, EPA agrees that for purposes of reporting PAL exceedances, 2 days might not provide sufficient time because the Permittee becomes aware of the exceedance only after calculating monthly emissions and time is needed to verify the accuracy of the data and emissions. Therefore, EPA revised Condition VII.B. to require the Permittee to report any PAL exceedance within 15 days of the end of the month in which the PAL is exceeded.

Comment No. 105.
In Condition VII.C., the language should be modified to state that the re-validation test results should be included in the next semi-annual report submitted at least three months after completion of the test.

Response 105
EPA disagrees with this comment. 40 CFR §52.21(aa)(14)(iii) clearly states, "[t]he owner or operator shall submit to the Administrator the results of any re-validation test or method within 3 months after completion of such test or method." The commenter has provided no reason to deviate from the regulatory requirement and allow the re-validation test results to be included in the next semi-annual report submitted at least three months after completion of the test. In order to clarify that reporting will be required for both validation and revalidation testing, EPA revised Condition VII.C. and added the term, "validation," to the condition and added the term, "revalidation," to Section V.

Comments from Limetree Bay Refining and Limetree Bay Terminals – Section VIII – Ambient Air Monitoring Requirements

Comment No. 106
EPA has proposed to require extensive ambient monitoring in the draft PAL permit. EPA claims that these requirements are "necessary to assure continued operational compliance with the public health standards once the facility begins to operate" and "will ensure compliance with the health-based NAAQS in a community highly impacted by multiple complex environmental burdens." EPA also claims that requiring monitoring will "meet EPA's obligation under Executive Order (EO) 12898 to ensure that the permit does not cause a disproportionately high and adverse human health or environmental effects on the community." (emphasis added). EPA's conclusions are not supported by the EJ air modeling results, historical air monitoring data, or the law and these costly and burdensome ambient monitoring requirements must be removed from the PAL.

Response 106
EPA does not agree with Limetree's assertion that EPA's conclusions with respect to the ambient air monitoring conditions are not supported by (1) the EJ air modeling results, (2) historical air monitoring data, or (3) the law. EPA has provided detailed responses on these issues in EPA's Response to Comment 107 (with respect to EJ air modeling results), Response to Comments 108 -110 (with respect to the law), and Response to Comment 114 (with respect to historical air monitoring data). In addition, EPA provides, below, an overview of the circumstances that led to the ambient monitoring requirements in the PAL permit.

Historically, five ambient monitors were installed and operated by the former owner, HOVENSA (also HOVIC and Hess Oil prior to that) well before the facility ceased operating in 2012 because EPA had modeled violations of the 24-hour SO2 NAAQS. Even prior to that, HOVENSA operated the ambient monitors because it requested a source specific variance to the sulfur limits. The existing PSD permit requires Limetree to operate the five ambient monitors. While Limetree may plan to use lower sulfur fuel, the issue today is that EPA promulgated a new SO2 NAAQS based on a 1-hour average which is stricter than the 24-hour SO2 NAAQS that was previously violated when HOVENSA was operating under its existing permits.

The available ambient data shows that had HOVENSA continued operation as they had been historically, there would have been violations of the new 1-hour SO2 NAAQS. See Table in EPA Response to Comment 108(d) and Air Quality System summary report. Therefore, the request to operate the ambient monitors is based on information that demonstrated reasons for significant concern. Further, EPA agreed to allow the shutdown of the ambient monitors when HOVENSA ceased operations with the understanding that the monitors would be restarted if the refinery restarted operations (see April 2012 letter from HOVENSA to Steve Riva and reply back from Ray Werner in May 2012.) The existing PSD permit requires Limetree to operate the five SO2 monitors.

Since the HOVENSA facility tended to emit more than 2000 tpy of SO2, it would have been a candidate source that needed to be modeled to determine whether the area should be designated as an attainment or nonattainment area for the 1-hour SO2 NAAQS under Round 3 designation process. Since the HOVENSA facility ceased operating during this time, the facility was not included in the assessment. As a result, the facility's impacts on the 1-hour SO2 NAAQS designation are uncertain. These are among the reasons why EPA required Limetree to perform a modeling analysis for SO2. EPA also included NO2 and PM2.5 in the required modeling analysis because of new short-term standards for those pollutants that were not previously assessed in HOVENSA modeling.

However, the modeling analysis did not resolve the uncertainties about the ambient impacts from the facility. Because of flaws in Limetree's EJ modeling, EPA is exercising its authorities under Sections 114 and 165 of the Clean Air Act and Section 40 CFR § 52.21(aa)(8)(ii)(*b*)(*3*) and 40 CFR § 52.21(aa)(7)(x) of the PAL provisions to require ambient monitoring. These authorities are discussed more fully in EPA's Response to Comments 108(a) and (b), 110(b), and 111(b), among other responses. The largest flaw in the modeling analysis is the lack of technically creditable short-term emission rates for SO2, NO2 and PM2.5. As explained in the September 19, 2019 Environmental Justice Analysis for the Limetree Bay Terminal (EPA-Limetree EJ Analysis), the short-term emission rates were based on inaccurate assumptions. They were not based on actual measured short-term emission rates or calculated based on maximum short-term process rates and appropriate emission factors such as those found in AP-42. According to Limetree, the actual measured short-term emission rates from each unit were not archived by HOVENSA and thus were not available for the calculation of the actual short-term emission rates as inputs to the model.

Further, the modeling analysis did not account for the variability in short term emission rates or the variability in emission increases at different units. The model did not assess the worst-case short-term emission rate at any given unit at any given time. Limetree acknowledges that the emission rate in the model assumes uniform emissions. A uniform emission rate for multiple emission units is not representative of actual operating scenarios. While the variability of emission rates under a PAL, by itself, would not trigger a concern sufficient to require ambient monitoring, the absence of technically creditable short-term emission rates for the modeling analysis gives us insufficient confidence that Limetree's maximum impacts will meet the NAAQS for SO2, NO2 and PM2.5. See also EPA Response to Comments 113(c) and (d). While such a showing is not expressly required by the PAL provisions to support issuance of a PAL, as discussed in more detail in EPA Response to Comment 108, under 40 CFR § 52.21(aa)(8)(ii)(*b*)(*3*), the reviewing authority has the discretion to "reduce the PAL if [it] determines that a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation." Given the historic conditions in this area, EPA needs to be prepared to invoke this authority if Limetree Bay actions under the PAL were to cause or contribute to a violation. Since Limetree has not provided modeling sufficient to demonstrate that EPA will not need to invoke this authority in the future, EPA is exercising authority described in more detail in Response to Comment 108 to require post-operation monitoring in the form of a network of continuous ambient monitors to capture Limetree's maximum impacts under various operating scenarios and various meteorological conditions.

Since the emission scenarios vary, so does the location of the maximum impacts. The location of maximum impact also varies due to different meteorological conditions such as different wind

directions. Therefore, a network of monitors is needed to assess the air quality concentrations that covers a wide area. Requiring ambient monitoring at five separate locations is consistent with the number of locations operated by the former owner, HOVENSA. Five SO2 monitors have been in operation since the late 1970's and some monitors were relocated over time due to various requirements. EPA sees no justification to cease operation of these ambient air monitors with the facility operating again and the revised SO2 NAAQS in place. In addition, EPA is requiring two ambient monitors for NO2 and one for PM2.5 because there are new short-term NAAQS for these pollutants that were never assessed in previous modeling analyses for HOVENSA.

In addition, the claim that historical monitoring does not support the need to continue the ambient monitoring is incorrect. In fact, the historical measurements are a key reason why EPA believes these monitors must continue in this case. In 2010, when the 1-hour SO2 NAAQS was first promulgated, the Station 1 monitor measured a violation of the 1-hour SO2 NAAQS. In 2011, Stations 2 and 3 measured exceedances of the 1-hour average SO2 NAAQS. Further, while the NAAQS was not yet in effect, EPA noted that in 2008 and 2009, the years immediately preceding the promulgation, violations or exceedances were measured at the same stations. It is concerning that the violations and exceedances were measured during the same 2-year period used for the baseline actual emission (BAE) calculations for the PAL. The violations/exceedances could very well be repeated when the facility is restarted. Therefore, EPA has reasons to be concerned and thus has determined that safeguards are necessary to alert us to any potential NAAQS exceedance or violation.

EPA disagrees with the commenter's claim that the ambient monitoring requirement is "extensive." Post-operational monitoring often comprises several ambient monitors surrounding the facility. In some cases, there are up to twelve monitors (e.g., Lovett Power Generating station in New York). The prior owners and operators of the refinery, HOVENSA, HOVIC, and Hess Oil have all conducted ambient monitoring beginning back in 1979. In this case, only eight monitors (5-SO2; 2-NO2; 1-PM2.5) are required at approximately the same five locations as previously sited. To minimize the cost, EPA is largely allowing the use of the existing infrastructure for installing the ambient monitors. To maximize the cost effectiveness and efficiency in the use of the monitors, EPA is allowing Limetree to relocate an existing ambient monitor at Station 2 to the "Peak" location, instead of adding a new monitor at the "Peak." The proximity between Stations 2 and 3 suggests that the measurements would likely be redundant.

Just after HOVENSA ceased operating the refinery, the company submitted a request to EPA Region 2 on April 26, 2012 to shut down the five ambient monitors that were required as a condition of the PSD permit. This request included a commitment to resume the ambient monitors in the event that the refinery restarts. As stated by HOVENSA, "if the process units were to start up again, we would of course resume the operation of all 5 stations prior to startup of the first process unit."

On May 30, 2012, EPA agreed to allow the refinery to shut down the ambient monitors and relax this PSD permit condition on the premise that the monitors would be restarted if the refinery restarted. Any reduced effort would not only break a commitment made by HOVENSA when they requested to shut down the monitors on April 26, 2012 but also would be a violation of the refinery's PSD permit. And it would deepen the serious concerns already expressed and

submitted in public comments by many members of the community about impacts to their health from the facility (see EPA Response to Comments 116, 118-120, 126 and 128).

Comment No. 107
The EJ air modeling and analysis of air monitoring data demonstrated that there would not be an adverse impact on nearby communities and that the NAAQS would not be exceeded. Although EPA acknowledges that the modeling did not indicate that there would be an adverse impact from the permit, it nevertheless is requiring extensive monitoring. As such, the monitoring exceeds EPA's authority in conjunction with an EJ analysis under EO 12898 because it is based on an inaccurate characterization of the EJ status in nearby communities. In effect, EPA does not properly consider the EJ air quality modeling analysis and existing monitoring data that demonstrate ambient impacts do not exceed the NAAQS.

Response 107
The comment states that EPA has exceeded its authority under Executive Order 12878. However, EPA is exercising its authorities under Sections 114 and 165 of the Clean Air Act and Section 40 CFR § 52.21(aa)(8)(ii)(b)(3) and 40 CFR § 52.21(aa)(7)(x) of the PAL provisions to require ambient monitoring. These authorities are discussed more fully in EPA's Response to Comments 108(a) and (b), 110(b), and 111(b), among other responses. Moreover, EPA disagrees that the Limetree EJ modeling analysis and air monitoring data demonstrated that there would not be an adverse impact on nearby communities and that the analysis showed that the NAAQS would be protected. Further, the sentence to which the commenter refers (regarding EPA acknowledging the model results) is taken out of context. EPA did not state that the modeling indicated there would be no adverse impact. Rather, EPA was only reiterating the written words made in the Limetree EJ modeling report. This does not constitute an approval of the modeling analysis. EPA cannot rely on Limetree's EJ modeling for assuring compliance with the NAAQS given the flaws and uncertainties in Limetree's EJ modeling that EPA identified in the EPA-Limetree EJ Analysis. See also EPA Response to Comment 106.

The Limetree EJ modeling analysis contained several uncertainties which prevent EPA from relying on the results for SO2, NO2 and PM2.5. It is also unclear how the commenter could conclude that the ambient monitors showed compliance when they have been shut down since 2012. In addition, the SO2 ambient monitors that were in operation prior to the shutdown showed exceedances and violations of the 1-hour SO2 NAAQS from 2008 to 2011, as stated in the EPA-Limetree EJ Analysis. See also EPA Response to Comment 106. Therefore, the requirement to conduct ambient monitoring is not only consistent with EPA's authorities under the Clean Air Act and regulations, as discussed above, but is necessary due to the already environmentally burdened low income and minority communities surrounding the facility.

Regarding the commenter's claim that EPA based its decision on an inaccurate characterization of the EJ status in the nearby community, EPA provided several examples of disproportionate and adverse environmental burdens experienced by the nearby community and used information from the 2010 census provided in the FEMA report that showed a vast percentage of the population in the south central section of the island to be low income and minority in comparison to the rest of the island.

Limetree Comment No. 108. There is no legal basis for ambient monitoring.

Comment No. 108(a)
There is no legal basis for the monitoring. Ambient monitoring is not legally authorized by the rules governing PAL permits
Response 108(a)
We disagree that there is no legal basis for the ambient air quality monitoring in the PAL permit. The PAL provision in 40 CFR § 52.21(aa) neither prohibits nor requires the permitting authority to include ambient monitoring in the permit, but EPA has discretion under the Clean Air Act and the regulations at 40 CFR § 52.21 to require ambient monitoring in this circumstance.

The PAL provision in 52.21(aa) states that the PAL permit "must contain, at a minimum" certain information such as the effective date and expiration date, renewal procedures, monitoring, calculation, record-keeping and reporting requirements, along with "any other requirements that the Administrator deems necessary to implement and enforce the PAL." 40 CFR § 52.21(aa)(7)(x) (emphasis added). One of the subsections of the PAL provisions that EPA has discretion to implement and enforce is 40 CFR § 52.21(aa)(8)(ii)(b)(3), which provides that the reviewing authority can "reduce the PAL if [it] determines that a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation." Given the historic conditions in this area, EPA needs to be prepared to invoke this authority if Limetree Bay actions under the PAL cause or contribute to violation. The PAL provisions at 40 CFR § 52.21(aa) do not expressly say that Limetree must demonstrate that its actions under the PAL will not cause or contribute to a violation in order to qualify for a PAL. However, the historic conditions in this area motived EPA to assess this question before issuing the PAL in this case. As discussed in EPA Response to Comment 106, the modeling performed by Limetree leaves significant uncertainty that makes it impossible for EPA to know at this time if the facility will cause or contribute to a NAAQS exceedance. Ongoing uncertainty of this nature would frustrate EPA's ability to implement its authority under section 40 CFR § 52.21(aa)(8)(ii)(b)(3) of the PAL provision. Thus, we are applying the broad authority under 40 CFR § 52.21(aa)(7)(x) to establish these ambient monitoring conditions because we consider them necessary to implement and enforce the PAL in the manner described in 40 CFR § 52.21(aa)(8)(ii)(b)(3), if appropriate circumstances arise for doing so.

The Clean Air Act also provides EPA with legal authority to require ambient monitoring. Pursuant to CAA Section 165(a)(7), a permit under Title I, Part C of the Clean Air Act cannot be issued unless the owner and operator of a major emitting facility agrees to "conduct such monitoring as may be necessary to determine the effect which emissions from any such facility may have, or is having, on air quality." In addition, under Section 114 of the Clean Air Act, "Congress has vested in EPA certain investigatory and enforcement authority, without spelling out precisely how this authority was to be exercised in all the myriad circumstances that might arise in monitoring matters relating to clean air." *Dow Chem. Co. v. United States*, 476 U.S. 227, 106 (1986). The D.C. Circuit, in *Alabama Power Co. v. Costle*, 636 F.2d 323, 371 (D.C. Cir. 1979), held that "Section 114 grants the Administrator broad authority to require monitoring by any source that in his judgment is necessary to carry out his responsibilities under the Act. This includes an authority to require post-construction monitoring." In addition, the Third Circuit has held that, under Section 114, "EPA is statutorily empowered to require . . . any person . . . to . . . submit to inspections, monitoring, and emissions sampling, and 'provide such other information as the Administrator may reasonably require.' *United States v. EME Homer City Generation,*

L.P., 727 F.3d 274, 289 (3d Cir. 2013) (emphasis added). Indeed, "Section 114 . . . appears to expand, not restrict, EPA's general powers to investigate. Nor is there any suggestion in the statute that the powers conferred by this section are intended to be exclusive.*" Dow Chem. Co.,* 476 U.S. 227, 234 (1986); *see also Ass'n of Irritated Residents v. E.P.A.*, 494 F.3d 1027, 1036 (D.C. Cir. 2007) (holding that, under Section 114(a), "EPA may require a facility subject to the Clean Air Act to take actions to facilitate implementation of the Act or to determine whether the facility is in compliance."). And courts have widely upheld EPA's authority to act under Section 114(a)(1)(C). *See, e.g., Mexichem Specialty Resins, Inc. v. E.P.A.*, 787 F.3d 544, 561 (D.C. Cir. 2015) (upholding an EPA rule because, in pertinent part, it "was enacted pursuant to EPA's statutory authority under Section 114(a)(1)(C), permitting the agency to require the installation, use, and maintenance of monitoring equipment.").

EPA's promulgation of the PAL portion of 40 CFR § 52.21 neither explicitly nor implicitly takes away the Agency's authority inherent in Section 114 of the Clean Air Act. It also doesn't rewrite the statutory requirement under Section 165(a)(7) of the Act for "such monitoring as may be necessary to determine the effect" of emissions from the source on air quality. In fact, as discussed below, there is a recognition in the PAL provisions at 40 CFR § 52.21(aa) and the preamble to the NSR Reform rule, which contains the PAL provisions, that circumstances exist under which the permitting authority should ensure that the NAAQS and PSD increments are not adversely impacted by the PAL.

As discussed above, 40 CFR § 52.21(aa)(8)(b)(3) allows the permitting authority to reduce the PAL if "a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation." EPA, as the permitting authority, would be unable to learn of a NAAQS or increment violation without the requisite ambient monitoring and, as a result, could not achieve the clear purpose of this provision – to ensure that a PAL does not cause a NAAQS or increment violation. EPA stated in the Technical Support Document (TSD) for the 2002 Final NSR Reform rule that:

> *We believe reviewing authorities are in the best position to determine whether there is a need to reduce the PAL for air quality reasons and therefore the final rules give the reviewing authority the discretion to do so.* TSD at I-7-45.

40 CFR § 52.21(aa)(8)(b)(1) also allows the permitting authority to "reduce the PAL to reflect newly applicable Federal requirements." If a new, more stringent, NAAQS were promulgated, it would be considered a federal requirement and EPA would analyze whether the PAL needs to be reduced. Just as in this case, where there were new, more stringent, NAAQS promulgated for SO2, NO2, and PM2.5, ambient monitoring would be appropriate if modeling left too much uncertainty about whether the new federal requirement could be met. Therefore, the language in 40 CFR § 52.21(aa)(8)(b)(1) further confirms that post-operational ambient monitoring is not inconsistent with the PAL provisions. In this case, the modeling conducted by Limetree left significant uncertainty about the NAAQS due to the lack of accurate emissions data. See EPA Response to Comment 106.

The preamble to the NSR Reform rule, which contains the PAL provisions, establishes the importance of protecting the NAAQS during PAL permitting when the PAL results in eliminating restrictions previously taken at the facility to avoid PSD applicability. The preamble states that:

> *An actuals PAL may eliminate enforceable permit limits you may have previously taken to avoid the applicability of major NSR to new or modified emissions units…. Before removing the limits, your reviewing authority should make sure that you are meeting all other regulatory requirements and that the removal of the limits does not adversely impact the NAAQS or PSD increments.* 67 Fed. Reg. 80196, 80210 (Dec. 31, 2002) (emphases added).

This is precisely the case with Limetree because it seeks to eliminate restrictions currently contained in two of HOVENSA's PSD permit modifications, issued in 2007 and 2011.[2] See Limetree Comments, Attachment I. Among the conditions that Limetree seeks to eliminate are limitations on PM2.5 emissions in the GT-10 2007 PSD permit. Limetree states in its comments that, "pursuant to 40 CFR § 52.21(aa)(1)(ii)(*c*), the limits in EPA-issued PSD permits for purposes of ensuring non-applicability of substantive PSD requirements with respect to certain pollutants (i.e., (r)(4) limits) are eliminated by the issuance of the PAL permit."

As EPA acknowledges in EPA Response to Comment 15, the PAL regulation at 40 CFR § 52.21(aa)(ii)(c) does provide for relaxing previously enforceable limitations under 40 CFR § 52.21(r)(4). Since significant uncertainty remained after Limetree performed the modeling analysis, as discussed in EPA Response to Comment 106, ambient monitoring is warranted consistent with the statement referenced above from the preamble to the 2002 NSR reform rule. Lifting the PM10 restrictions only serves to increase the level of uncertainty about whether the PM2.5 NAAQS will be violated as a result of impacts from Limetree. See Response to Comment 106 regarding uncertainty in the modeling and discussion below regarding the need for ambient monitors for SO2 and NO2.

In addition, as noted earlier, in Response to Comment 106, the PSD permit for the facility requires five monitoring stations for SO2. Issuance of the PAL does not relieve Limetree of this PSD permit requirement. Given the stricter 2010 short-term SO2 standard and the results of the modeling analysis, there is too much uncertainty about whether emissions from the facility will exceed the NAAQS and thereby endanger the environmental justice community. This heightens the importance of the PSD permit condition, based on EPA's Clean Air Act authority, that requires Limetree to run the five monitoring stations.

The 2002 rule preamble also recognizes that the permitting authority has discretion "to take into account measures necessary to prevent a violation of a NAAQS or PSD increment, and to prevent an adverse impact on an AQRV in a Federal Class I area," upon renewal of a PAL. 67 Fed. Reg. 80220. The preamble defers to the reviewing authority's existing programs for addressing air quality issues and allows the reviewing authority to "request air quality modeling for any changes if it believes that the changes under the PAL may affect the NAAQS and PSD increment." See also 2002 Technical Support Document for NSR Reform rule, Response to Comment 7.4.3, 4.4. EPA, not the United States Virgin Islands (USVI), is the reviewing authority for this PAL permit. Even where the PAL is renewed at a level less than 80% of the original PAL, the reviewing authority can determine that the PAL levels are "inconsistent with the levels necessary to achieve the NAAQS." 67 Fed. Reg. 80209. The reviewing authority may also "adjust the PAL level at its discretion based on air quality needs" for SIP planning purposes,

[2] HOVENSA's PSD permit and modifications can be found at https://www.epa.gov/caa-permitting/caa-permits-issued-epa-region-2.

67 Fed. Reg. at 80217, which EPA could do in conjunction with the USVI through their SIP process.

It does not follow that EPA can take air quality into account upon lifting restrictions on some pollutants when issuing the initial PAL permit, during a permit renewal, or when adjusting a PAL at its discretion, but not include ambient monitoring requirements in a PAL permit, consistent with our Clean Air Act statutory and regulatory authorities, when we have cause for concern about air quality (an issue of special importance in an environmental justice community).

There are numerous occasions where either pre- or post-permit monitoring requirements are imposed on an applicant for a major source. Often, data from a representative state monitoring network may act as a surrogate for these requirements. However, in this case there is no existing ambient monitoring data available for NAAQS assessments that may be used and, therefore, without these conditions in the permit, EPA would be unable to determine whether it would be appropriate to adjust the PAL under 52.21(aa)(8)(ii)(b) to protect the NAAQS.

Comment No. 108(b)
As set forth in greater detail in response to Section VIII (Ambient Air Monitoring Requirements) of the draft PAL permit, ambient monitoring required under 42 U.S.C. § 7410(a)(2)(B) for purposes of demonstrating compliance with the National Ambient Air Quality Standards (NAAQS) is required to be performed by the state or territory. The state or territory may delegate that obligation to a "local or regional government, agency, or instrumentality," but it may not delegate that responsibility to a regulated entity and the state or territory is ultimately responsible for "ensuring adequate implementation" of, among other things, ambient air quality. The same is true for the United States (US). The Clean Air Act does not authorize the US to delegate the state's ambient air monitoring obligations to a regulated entity.

Response 108(b)
The Clean Air Act provision cited in the comment relates to required elements that states must include in their SIPs under Section 110 of the Clean Air Act. This requirement upon the states does not supplant Region 2's authority under 40 CFR § 52.21(aa)(7)(x) to impose "any other requirements that the Administrator deems necessary to implement and enforce the PAL," such as ambient monitoring to protect the NAAQS under 40 CFR § 52.21(aa)(8)(ii)(b)(3). The provision cited by the commenter also doesn't supplant EPA's authority under Clean Air Act Sections 165(a)(7) and 114 to require ambient monitoring for specific sources that may pose a health threat to the local community.

A "PAL Permit" is defined as the "major NSR permit, the minor NSR permit, or the State operating permit under the program that is approved into the State Implementation Plan, or the title V permit issued by the Administrator that establishes a PAL for a major stationary source." 40 CFR § 52.21(aa)(2)(ix). Since EPA is not the minor source permitting authority in the USVI, the USVI implementation plan is disapproved with respect to PSD, and 40 CFR § 52.21 is incorporated into the applicable implementation plan, by the process of elimination, Limetree's PAL is a "major NSR permit" under 40 CFR § 52.21. It therefore falls under the "Prevention of Significant Deterioration program", which is defined in 40 CFR § 52.21(b)(43) as "the EPA-implemented major source preconstruction permit program[.]" The definition also provides that "[a]ny permit issued under such a program is a major NSR permit." As a permit issued under 40

CFR § 52.21, the PAL is a permit under Part C of the Clean Air Act and must not interfere with attainment or maintenance of the NAAQS. See, e.g., CAA Section 165(a)(3) (emissions from construction or operation must not cause or contribute to a NAAQS exceedance); CAA Section 165(a)(7) (the owner and operator of a major emitting facility agrees to "conduct such monitoring as may be necessary to determine the effect which emissions from any such facility may have, or is having, on air quality."); see also EPA's May 1987 *Ambient Monitoring Guidelines for Prevention of Significant Deterioration*, Section 2.1 (making clear that "EPA has discretion in requiring postconstruction monitoring data under section 165(a)(7) of the Clean Air Act . . . . Examples of when a permit granting authority may require postconstruction monitoring data may include:…b. Source impact is uncertain or unknown - Factors such as complex terrain, fugitive emissions, and other uncertainties in source or emission characteristics result in significant uncertainties about the projected impact.")

EPA disagrees with Limetree's contention that it is the responsibility of the USVI to install ambient monitors necessary to carry out this provision of the PAL regulation. Even in jurisdictions where a complete ambient monitoring network is in place, if a particular facility could be the primary cause of a NAAQS or increment exceedance, the permitting authority would retain its discretion to require the facility to conduct additional monitoring of its potential impacts in the locations of concern, as EPA is requiring here.

There is a distinction between the source's responsibility for its specific impacts and a state's responsibility under Section 110 of the Clean Air Act to address NAAQS violations. Thus, in addition to addressing a violation pursuant to the PAL provision at 40 CFR § 52.21(aa)(8)(ii)(b)(3), there are other options to address a NAAQS or increment violation, if one occurs, through the State Implementation Plan (SIP) process. For example, it is possible that a limited number of specific units could be responsible for a NAAQS violation, and we could address that violation through the SIP without reducing the PAL. The response to a violation would be tailored to the particular situation. However, the USVI's involvement in addressing a future violation of NAAQS in no way limits EPA's authority to require ambient monitoring in a permit to obtain information necessary to determine whether to exercise authority to adjust a PAL to address a source's specific impacts.

Comment No. 108(c)
On November 12, 2019 the United States issued a grant to the US Virgin Islands to re-establish, operate, and maintain an air monitoring network to monitor ambient air concentrations of PM2.5 but not the other air pollutants that the US has sought to delegate to Limetree Bay. See U.S. Environmental Protection Agency, EPA Awards $412,101 to the U.S. Virgin Islands to Improve Air Quality (Nov. 12, 2019), https://www.epa.gov/newsreleases/epa-awards-412101-us-virgin-islands-improve-air-quality-0.

Response 108(c)
EPA is not seeking to delegate responsibility to Limetree for an air monitoring network for any of the pollutants. The funding provided to the USVI for PM 2.5 ambient monitoring is a separate issue that is independent of this permit action.[3] And whether or not EPA funds a monitoring network for other pollutants in the USVI is also unrelated to this permit action. See also discussion, above, in EPA Response to Comment 108(b) regarding the distinction between the

[3] The only connection is that Limetree used the measured data from the existing PM2.5 ambient monitor in Bethlehem Village for their modeling analysis to account for background concentrations.

ambient monitoring program required in SIPs under Section 110 of the Clean Air Act and source-specific concerns. EPA's purpose in Section VIII of the PAL permit is to apply its authorities under the Clean Air Act Sections 114 and 165 and the PAL provisions at 40 CFR § 52.21(aa)(8)(ii)(b)(3) and 40 CFR § 52.21(aa)(7)(x) to require ambient monitoring that will provide ambient data specific to the environmental justice community near the facility rather than impose an overall Island-wide monitoring network.

Comment No. 108(d)
In addition, EPA has asked Limetree Bay to perform ambient air monitoring at Station 1, where there are no residential dwellings nearby. Both of these facts support a conclusion that EPA clearly is trying to delegate ambient monitoring requirements to Limetree Bay, rather than requiring monitoring for EJ reasons.

Response 108(d)
EPA proposed to retain the ambient monitor at Station 1 since it is downwind of a prevailing wind direction and measures concentrations most often for both SO2 and NO2. This monitor's location is still defined as ambient air and the monitor's operation is a required part of the refinery's PSD permit for SO2. Historical measurement at this monitor has shown elevated concentrations and violations of the 1-hour 75 ppb SO2 NAAQS while HOVENSA was operating, including during the baseline years used for setting the PAL (see table 6c, included below). Therefore, it is imperative to resume the operation of this monitor for SO2 and add a monitor for the NO2 standard, so that all the averaging times of the health-based standards for those pollutants are evaluated to ensure air quality protection in the prevailing downwind direction. Although there were no residences in the specific area of Station 1, the likely extent of an SO2 or NO2 violation includes areas with residences and any violations of the SO2 or NO2 standard at this monitor would also represent air quality concerns for nearby residential areas. Thus, the reason for requiring Station 1 is due to the facility's specific maximum impacts in the prevailing wind direction and it is not a substitute for either an SO2 or NO2 monitoring network for the Virgin Islands.[4]

[4] This monitor is also upwind of the Sandy Point Wildlife Refuge and provides an indicator of air quality trends from Limetree in that direction (see RTC # for further details on the endangered species and coral.)

Table 6c. Monitoring Site Design Value History Site level for Sulfur Dioxide 1 Hr NAAQS for 2004 through 2013

AQS Data Query: 5/8/2014 Last Updated: 5/13/2014

Site	2004 Design Value (ppb)[1,2]	2005 Design Value (ppb)[1,2]	2006 Design Value (ppb)[1,2]	2007 Design Value (ppb)[1,2]	2008 Design Value (ppb)[1,2]	2009 Design Value (ppb)[1,2]	2010 Design Value (ppb)[1,2]	2011 Design Value (ppb)[1,2]	2012 Design Value (ppb)[1,2]
780100006	128	114	88			79	80	72	53
780100011	58	49	50	46	57	40	46	38	34
780100013	35	35	38	34	33	23	25	29	25
780100014	10	16	19	19	13	9	9	10	
780100015	9	15	18	18	13	9	9	9	8

1. The level of the 1-hour NAAQS for sulfur dioxide is 75 parts per billion (ppb) calculated as the 3-year average of the 99th percentile of the annual distribution of daily maximum 1-hour average concentrations

2. The design values shown here are computed for the latest design value period using Federal Reference Method or equivalent data reported by States, Tribes, and local agencies to EPA's Air Quality System (AQS) as of *05/08/2014*. Concentrations flagged by States, Tribes, and local agencies as exception events (e.g., high winds, wildfires, volcanic eruptions, construction) and concurred by the associated EPA Regional Office are not included in the calculation of these design values.

Note: When design values are used in a regulatory action, they are based on the latest information and valid data available at the time of that action, not the values published here.

Comment No. 108(e)

If the US is not seeking to delegate the Virgin Islands' ambient air monitoring obligations under 42 U.S.C. § 7410 to Limetree Bay, EPA should have explained to the public that the ambient air monitoring being imposed under Section VIII is unrelated to Limetree Bay's compliance with the PAL permit since it will monitor ambient air concentrations from all sources against national ambient air quality standards, rather than the PALs.

Response 108(e)

Limetree Bay could comply with all of the conditions in the PAL permit and the unit-specific monitoring, recordkeeping, and reporting requirements and yet the ambient monitors could still detect an exceedance and/or violation of the NAAQS. The detected exceedance and/or violation of the NAAQS would not represent a violation of the PAL permit, but may justify an adjustment of the PAL. The monitoring data is needed to implement 40 CFR § 52.21(aa)(8)(ii)(b) of the PAL provisions. The specific locations of the ambient monitors in the PAL permit were selected to coincide with Limetree's maximum impacts and is not being used as a replacement for a monitoring network for the USVI. EPA explained to the public in the EJ report and at the public availability session that the locations of the ambient monitors were selected specifically from the perspective of Limetree's impacts as the primary source to the prevailing downwind location (Station 1), residential areas (Stations 3, 4, and 5), and areas where peak impacts are projected. EPA explained that the meteorological monitor, which is site-specific to Limetree, is also required so that wind data is collected that may be used to further assess analytical studies regarding the sources of elevated concentrations. The ambient monitors are located in Limetree's maximum impact areas. However, in the unlikely event that another source on the Island could cause or contribute to a violation or exceedance at those monitors, there are analytical methods that may be used to further determine the origin of those measured monitored concentrations such as source apportionment modeling, back trajectories, or chemical mass balance methods. See also EPA's response to comment 108(a)-(d), which explains why the monitoring stations and conditions in Section VIII of the PAL permit are specific to Limetree and not designed for general air quality monitoring on St. Croix.

Limetree Comment No. 109. The proposed Monitoring Requirements are not authorized by PAL rules and are inconsistent with previous EPA PAL permits

Comment No. 109(a)
The only monitoring requirements EPA is authorized to impose in a PAL permit are those that are necessary for "accurately determin[ing] plantwide emissions of the PAL pollutant in terms of mass per unit of time." 40 CFR § 52.21(aa)(12)(i)(*a*). The ambient monitoring requirements proposed by Region 2 are entirely unrelated to this purpose and are, therefore, not within EPA's authority in a PAL permit.

Response 109(a)
EPA disagrees with the assertion that ambient monitoring requirements are not within EPA's authority. While the commenter is correct that 40 CFR § 52.21(aa)(12)(i)(*a*) refers to monitoring of plantwide emissions, EPA is not asserting authority for the ambient monitoring conditions under that provision. Rather, EPA is exercising its authority for the ambient monitoring conditions under section 40 CFR § 52.21(aa)(8)(ii)(b)(3) and 40 CFR § 52.21(aa)(7)(x) of the PAL provisions, and Sections 114 and 165 of the Clean Air Act. These authorities are discussed more fully in EPA's Response to Comments 108(a) and (b), 110(b), and 111(b), among other responses.

Comment No. 109(b)
Moreover, the issuance of a PAL permit by EPA pursuant to 40 CFR § 52.21(aa) is not an action that has the potential to cause disproportionately high and adverse human health or environmental effects on minority or low-income populations because, by definition, the PAL does not authorize new emissions.

Response 109(b)
Pursuant to EPA Region 2's Interim Environmental Justice Policy, the Region should apply EO 12898 to "permitting decisions that include new major permits, significant permit modifications, or major permit renewals." EPA Region 2 Interim Environmental Justice Policy at 26 (Dec. 2000). The PAL is a permit issued under 40 CFR § 52.21 and Part C of the Clean Air Act. As such, and as discussed in more detail in EPA Response to Comment 108(b), the permit is a major permit and its issuance is an action evaluated under EO 12898. The EPA Environmental Appeals Board (EAB) has determined that the EJ Executive Order applies to permits under 40 CFR § 52.21. See, e.g., *In re Zion Energy, LLC*, 9 E.A.D. 701, 706 (EAB 2001); *In re Knauf Fiber Glass, GmbH*, 8 E.A.D. 121, 127 (EAB 1999). Failure to address environmental justice in a permit under 40 CFR § 52.21 can result in a remand to the permitting authority. In carrying out its responsibilities under the Executive Order, EPA is given considerable deference:

> *The Board has recognized that the Executive Order on Environmental Justice does not dictate any particular outcome in a permit decision; rather, the order gives permitting authorities broad discretion to determine how best to implement its mandate within the confines of existing law. See In re Pio Pico, 16 E.A.D. 56, 91 n.30 (EAB 2013); see also U.S. EPA, Plan EJ 2014 Progress Report (Feb. 2013), available at http://www.epa.gov/environmentaljustice/; 78 Fed. Reg. at 27,222 (noting that each permit and community is different and that each EPA regional office has the insight and experience to develop strategies tailored to the particular communities and needs within the region).*

In Re Energy Answer Arecibo, LLC (Arecibo Puerto Rico Renewable Energy Project), 16 E.A.D. 294, 326 (2014).

The PAL might not authorize new emissions on an annual average basis, but the PAL does authorize increases in the short-term emission rate at different units as long as the annual PAL is not exceeded. This has implications for the 1-hour NO2, 1-hour SO2, and 24-hour PM2.5 NAAQS, which are all considered short-term NAAQS. These NAAQS were never assessed in previous modeling analyses for HOVENSA. Furthermore, the existing ambient data during HOVENSA's operation, including during the baseline years for establishing the PAL, showed exceedances and violations of the NAAQS for SO2. Therefore, the monitoring requirement is necessary to alert EPA to any possible exceedance or violation. EPA and DPNR would then evaluate the situation to consider the options for mitigating the problem including, among other things, action under 52.21(aa)(8)(ii)(b). This will also help ensure protection of the environmental justice community.

Comment No. 109(c)
Further, the PAL permit will reduce allowable emissions of SO2, NOx, and PM2.5 by 77% compared to what the facility would be allowed to emit in the absence of the PAL. The PAL is being issued as a means of reducing the administrative burden and increasing regulatory certainty for a facility that agrees not to make changes that would increase actual emissions. *See, generally,* 67 *Fed. Reg.* 80186 at pp. 80206-80208. Operating the Limetree Bay facility with a PAL permit will be more environmentally protective, not less, because the PAL permit will prohibit serial, insignificant emissions increases which are currently allowed because the facility is not subject to a PAL. *See, ibid* at p. 80206; *see, also, New York v. EPA,* 413 F.3d 3 (D.C. Cir. 2005). Because the PAL does not authorize new emissions, the ambient air monitoring is not required to determine emissions associated with the PAL. The PAL is being used as a vehicle to impose monitoring obligations for reasons wholly unrelated to the PAL. (Based on the PTE calculations and the proposed PAL limits, the PAL permit will reduce allowable emissions of SO2 by 88%, NOx emissions by 69%, and PM2.5 emissions by 67%, equal to a total reduction of 77% for these three pollutants.)

Response 109(c)
The magnitude of emission reductions claimed by the commenter doesn't paint a complete picture – for example, when the commenter compares Limetree's allowable emissions to HOVENSA's allowable emissions. The actual emission rates are not reduced by the percentage provided in the comment. The PAL was set based on the 2009-2010 annual average actual BAE. Further, there is no information regarding the impacts to the 2010 short term NAAQS from these annual mass-based limits. In addition, the emission rates proposed are still high in comparison to other major sources. See also EPA Response to Comment 114. As discussed in Response to Comment 108, the monitoring is related to the PAL because it provides information to enable EPA to assess whether adjustments may be needed to the PAL in the future.

Comment No. 109(d)
When EPA promulgated the PAL provisions, the agency explicitly considered and rejected including in the rule a requirement for air quality impacts analysis:

We agree with the commenters that requirements to evaluate ambient impacts would be likely to conflict with the goal of operational flexibility and minimal administrative burden, especially for small changes under the PAL. Moreover, we believe that we can rely on the reviewing authority's existing programs for addressing air quality issues resulting from changes under your PAL. As a result, the final PAL rules do not explicitly require modeling or other types of ambient impact assessments. *Technical Support Document for the Prevention of Significant Deterioration and Nonattainment Area New Source Review Regulations*, Nov. 2002, at p. I-7-57.

Response 109(d)
A review of the referenced section of the Technical Support Document (TSD) clarifies that the EPA was responding to comments concerned with the circumstances under which changes at the facility, after the PAL permit issuance, would trigger ambient air quality review. See *Technical Support Document for the Prevention of Significant Deterioration and Nonattainment Area New Source Review Regulations*, Nov. 2002, at pp. I-7-55-57. This is confirmed by the phrase "from changes under your PAL" in the TSD language cited by the commenter. The ambient monitoring conditions in Limetree's PAL permit do not require that the Permittee wait to make changes under its PAL until after ambient monitoring is completed. Thus, EPA is not restricting the operational flexibility or adding administrative burden with this permit action. Limetree will be able to make the physical and operational changes under this PAL without having to analyze the applicability of PSD or undertake any additional analysis of data gathered by the ambient monitors. Of course, Limetree should still consult with VIDPNR to determine whether a minor NSR permit might be necessary to authorize any physical or operational changes.

The rule also allows EPA to reopen the PAL under 40 CFR § 52.21(aa)(8)(ii)(b) if the agency believes that the NAAQS or increment are threatened. We do not have sufficient information regarding compliance with these NAAQS. In fact, with respect to SO2, the information we have shows that the NAAQS were violated while the refinery was in operation especially in the final years prior to shut down when the BAE were calculated. Since there were measured violations in the baseline years, Region 2 needs measured ambient data to determine whether or not the NAAQS will be violated in the location of Limetree's maximum impacts so that we can take further action to address the NAAQS problem. Without the data, EPA would not be able to effectuate the purposes of 40 CFR § 52.21(aa)(8)(ii)(b), which is designed to protect the NAAQS and increment. Otherwise, this language of the PAL provisions would be rendered meaningless. 40 CFR § 52.21(aa)(7)(x) makes clear that EPA has discretionary authority to add the ambient monitoring requirement to ensure implementation of 40 CFR § 52.21(aa)(8)(ii)(b). See also EPA Response to Comment 108(a) and (b).

Further, the quotes state that the reviewing authority may rely on its existing programs for addressing the air quality issues. In this case, the reviewing authority is carrying out its authority under Section 114 and Part C of the Clean Air Act to address the air quality issues and its responsibilities under the EO 12898.

Comment No. 109(e)
Until now, where EPA has acted as the PAL permitting authority (in the case of the Capitol Power Plant PAL permit), the agency has continued to implement and abide by its findings from 2002, i.e., that the PAL does not authorize emissions increases that weren't otherwise allowed and that ambient air quality impact assessment is unnecessary and inappropriate:

With regard to emissions of PM10 and NO2 (as addressed through a NOx PAL) authorized by this permitting action, EPA has also determined that this permitting action will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations, because it does not affect the level of CAA protection provided to human health or the environment. This permitting action ensures that emissions of PM10 and NO2 from the [facility] will not impact continued compliance with applicable NAAQS. NAAQS are national health-based standards that have been set at a level such that their attainment and maintenance will protect public health and welfare, including sensitive individuals, with an adequate margin of safety. See CAA § 109(b). Numerous health studies and comments from experts and the public are used in determining the NAAQS level that will be protective of public health.

Response 109(e)
Environmental justice analyses under EO 12898 are site specific. The permit matter referenced above, the Capitol Power Plant PAL, is much different than Limetree's. An EJ assessment for the Capitol Power Plant PAL permit concluded that there was no disproportionately high or adverse human health or environmental effects on a minority or low-income community. In Limetree's case, EPA concluded that there is a minority and low-income community that has been burdened by disproportionately high and adverse human health or environmental effects. See EPA-Limetree EJ Analysis. In addition, Limetree's emissions are an order of magnitude greater for each pollutant,[5] which poses greater risk to the NAAQS. As such, EPA cannot conclude that the operation of the refinery under the PAL will assure compliance with the NAAQS in the EJ community. In the Capitol Power Plant Permit, there was a comprehensive existing ambient monitoring network that would continue operating after issuance of that PAL and that EPA could rely on as representative of the specific impacts of the Capitol Power Plant, so that the Agency could apply the 52.21(aa)(8)(ii)(b) requirements as needed to protect the NAAQS. In Limetree's case, without the ambient monitoring, EPA will not have sufficient information to know whether Limetree's specific impacts will cause violations of the NAAQS. In the response to comments for the Capitol Power Plant PAL, EPA noted the monitoring network in the District of Columbia is far more concentrated than most other networks nationwide. Even in states that have a complete monitoring network, EPA can require a source-specific post-permit ambient monitoring requirement because not all networks will be effective for measuring local impacts from a specific source where there is concern. EPA's intention is not to use the Limetree ambient monitors as a substitute for an Island-wide network.

Comment No. 109(f)
The agency's prior determination in the Capitol Power Plant PAL permit states that de minimis emissions increases authorized under a PAL do not affect compliance with the NAAQS. Therefore, again, it appears that EPA is using the PAL as a vehicle to require ambient air monitoring where none is warranted or legally required.

EPA notes that the PALs established in this permit require that total emissions may only increase in amounts below the NSR significant emission levels. Those significant emission thresholds have been set at a level that represents de minimis emission increases that EPA has determined not to affect compliance with the NAAQS. Since the emission limits in the permit are set such that only de minimis increases in emissions may occur, this permitting action will protect air quality in the

[5] The emissions in the Capitol Power Plant PAL permit are a fraction of the emissions in this case. The Capitol's PAL is for 248 tons per year of NOx in comparison to Limetree's 5,594 tons per year of NOx. The Capitol's PAL is for 42 tons per year of PaM10 in comparison to Limetree's 412 tons per year.

region by ensuring compliance with the applicable NAAQS. Fact Sheet – Capitol Power Plant – EPA Draft Permit Number EPA-R3-PAL-001, Aug. 2012, at p. 23.

Response 109(f)
While EPA initially established the Significant Emission Rates in 1980 with air quality impacts in mind, it is important to consider this comment in the context of EO 12898 and the site-specific analysis performed for Limetree's permit. Related to EPA's concerns for the community referenced in EPA's Response to Comment 109(e) and the EPA-Limetree EJ Analysis, EPA is also concerned due to the combination of the magnitude of Limetree's emissions (which are much larger than the Capitol's emissions), the promulgation of the 2010 short-term NAAQS, revised PM2.5 NAAQS, and the environmental justice community on St. Croix. Further, Limetree's baseline emissions are considerably greater than those of the Capitol project and, therefore, they pose a greater threat to the NAAQS. This, in part, led Region 2 to require the ambient monitoring. See also EPA Response to Comment 109(b).

Limetree Comment No. 110. The Responsibility for Performing Ambient Monitoring and the Authority to Determine NAAQS Compliance Belong to DPNR

Comment No. 110(a)
In addition to the EJ modeling data, which demonstrates that operation of the Limetree Bay facility will not adversely affect nearby communities, it is worth noting that both site-specific ambient SO2, NO2, and PM2.5 monitoring data and air quality modeling analyses have demonstrated that the entirety of St. Croix is in compliance with the NAAQS.

Response 110(a)
First, as stated earlier, while the model calculated impacts over the entirety of St. Croix, the model results are inaccurate since the emission data used to calculate those impacts are flawed. See EPA Response to Comment 106. Second, the SO2 ambient monitors did not show compliance with the 1-hour SO2 NAAQS. See EPA Response to Limetree Comment 108(d). In addition, the monitors have been shut down since 2012. There are no operating NO2 ambient monitors in St. Croix. If the commenter is referring to the two NO2 ambient monitors operated by HOVENSA between 2006 to 2009, these were not evaluated for the 1-hour NO2 NAAQS since they were no longer operational at the time of promulgation of the 1-hour NO2 NAAQS in 2010. Moreover, these were also considered "background" monitors and not located in Limetree's predicted maximum impact location of the 1-hour NO2 NAAQS nor in the prevailing wind direction at Station 1. In addition to not being in Limetree's predicted maximum impact location, the two NO2 monitors were voluntarily installed by HOVENSA and were not reviewed or approved by EPA for regulatory purposes. We do not have certified data to conclude that there were no violations of the 1-hour NO2 NAAQS. There is a PM2.5 ambient monitor in Bethlehem Village, however it is not located in Limetree's predicted maximum impact location for the 24-hour PM2.5 NAAQS. As discussed above, the ambient monitors required in the PAL permit are specific to the areas of predicted maximum impact from the facility and located in nearby residential communities. See also EPA Response to Comment 114(c).

Comment No. 110(b)
As EPA has repeatedly acknowledged, compliance with the NAAQS are not requirements applicable to owners and operators of individual stationary sources such as the Limetree Bay facility. A NAAQS by itself does not impose any obligation on Limetree Bay. Instead, the

measures contained in each state's or territory's EPA-approved implementation plan are applicable requirements. The Clean Air Act provides that EPA sets the NAAQS, but the states and territories then determine how best to attain and maintain the NAAQS within their boundaries. See 4 U.S. Envt'l Protection Agency, Order Responding to Issues Raised in Nov. 24, 2008 Petition, and Denying Request for Objection to Permit, (Dec. 14, 2009), www.epa.gov/sites/production/files/2015- 08/documents/ekpc_dale_response2008.pdf.

Accordingly, obligations with respect to both ambient monitoring and preconstruction review programs to attain and maintain NAAQS compliance fall upon DPNR, not individual regulated entities. State implementation plans must:

> " . . .
> (B) provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to—
> (i) monitor, compile, and analyze data on ambient air quality, and
> (ii) upon request, make such data available to the Administrator;
> (C) include a program to provide for … regulation of the modification and construction of any stationary source within the areas covered by the plan as necessary to assure that national ambient air quality standards are achieved, including a permit program as required in parts C and D of this subchapter.
> (42 U.S.C. § 7410(a)(2), listing minimum requirements of implementation plans.)
> These requirements are implemented in 12 VIRR § 206-31, which is a part of the approved implementation plan for the Virgin Islands."

Response 110(b)
EPA agrees that, under Section 110 of the Clean Air Act, the states and territories determine how best to attain and maintain the NAAQS. However, this does not supplant the requirements in the Clean Air Act that pertain to the obligations upon individual sources to ensure that their emissions do not cause exceedances of the NAAQS. This is a key function of Clean Air Act, Title I, Part C and, as previously stated, Sections 165(a)(7) and 165(e)(1) of the Clean Air Act as well as the regulations at 40 CFR § 52.21 make clear that individual sources have this obligation. EPA is the permitting authority for PALs issued in the Virgin Islands because the Virgin Island's State Implementation Plan is disapproved with respect to PSD and, instead, the PSD regulation at 40 CFR § 52.21 is applicable. We also note that in the event that an ambient monitor measures impacts that are consistent with an exceedance or violation of the NAAQS, Limetree is not subject to liability under the permit conditions. Rather, EPA's awareness of the exceedance or violation of the NAAQS will enable EPA to take further action, such as reopening and reducing the PAL under 40 CFR § 52.21(aa)(8)(ii)(b)(3) or taking action under the State Implementation Plan. See also Response to Comments 108 and 109 regarding EPA's authority to require the ambient monitors and the site-specific, EJ-driven context for the PAL permit conditions on ambient monitoring.

Comment No. 110(c)
In DPNR's most recent Air Monitoring Network Plan, dated 2017, DPNR states that, based on population, 40 CFR Part 58 does not require monitoring in the US Virgin Islands for CO, O3, NO2, PM10 and PM2.5. Based on sources, 40 CFR Part 58 does not require monitoring in the US Virgin Islands for SO2, and Pb.

Response 110(c)
EPA is not requiring the US Virgin Islands to perform ambient monitoring based on population; rather, EPA is invoking its authorities under the Clean Air Act to require source specific monitoring at the Limetree facility. See EPA Responses to Comments 108(a) and (b) and 110(b).

Comment No. 110(d)
Unlike Region 3 in the Capitol Power PAL permit, Region 2 would require Limetree Bay to perform ambient air monitoring, usurping DPNR's authority to determine appropriate ambient monitoring requirements under the guise of issuing a PAL permit for de minimis increases in emissions from existing sources.

Response 110(d)
The VIDPNR retains authority to establish a USVI monitoring network. In addition, the VIDPNR will have a critical role in inspecting, evaluating the measured data and acting upon the data as has been the case since the late 1970s when the ambient monitors were first installed and operated by the refinery. Therefore, we are not usurping DPNR's authority. And, as discussed in Response to Comments 108, 109 and 110(b), above, EPA is the permitting authority for this PAL and has discretion to require ambient monitoring.

Limetree Comment No. 111. The Monitoring Requirements exceed the scope of an EJ analysis

Comment No. 111(a)
Until now (in particular, in the Capitol Power Plant permit), EPA has specifically rejected suggestions that EO 12898 allows EPA to impose ambient monitoring obligations in conjunction with issuance of a PAL permit:

[T]he commenters state that there is no site-specific monitoring data for PM10 or NO2 that supports the conclusion that the increase authorized by the PAL permit will not impact continued compliance with the National Ambient Air Quality Standards (NAAQS). The comments suggest that, under the Executive Order, EPA must conduct site-specific ambient monitoring before the Agency may issue the permit, to ensure "continued" compliance with the NAAQS.
*
*
[W]hile the emissions levels authorized by the PAL provide for a de minimis increase in emissions above the levels recently emitted by the facility, which were used to calculate the baseline emissions rate, the PAL permit is not allowing emissions increases over the current permitted levels and actually ensures that emissions will remain at a level far below their currently permitted levels. Accordingly, the level of emissions authorized by the PAL is more protective of human health, including that of minority and low-income populations, than the emissions levels that the [facility] could emit under its current permit.
With regard to any increase of emissions over the recent emissions levels that may occur after the PAL is issued, we reiterate that the "de minimis" levels upon which the PALs are based correspond to an increase in ambient concentrations that is very small relative to the NAAQS. As noted above, the NAAQS are set at a level that is protective of all public health, and the "de minimis" emission levels are set at a level much lower than that, at a level that has been determined to have an insignificant effect on NAAQS compliance. Therefore, EPA believes there is little to be gained from requiring the collection of monitoring data for the [facility] prior

to issuing this permit, primarily because the PAL will be more protective of air quality than if the facility simply continued operating as allowed under its current permit. At most, the PAL is allowing only de minimis emissions increases above actual emission levels, which as explained in the Fact Sheet and the responses above, should have an insignificant impact on the NAAQS. There is no other information or data that would indicate a need to go beyond the requirements of the existing federal regulations to conduct a more detailed analysis of the impact of those increases, particularly when [the facility] would be able to emit far more emissions absent the PALs. *Response to Comments – Capitol Power Plant – EPA Permit Number EPA-R3-PAL-001*, Jan. 2013, at pp. 8-9.

Response 111(a)
The comment suggests that EPA is asserting EO 12898 as its basis for imposing ambient monitoring conditions in the PAL permit. As stated in prior responses to the Permittee's comments, EPA is exercising its authorities under Sections 114 and 165 of the Clean Air Act and Section 40 CFR § 52.21(aa)(8)(ii)(b)(3) and 40 CFR § 52.21(aa)(7)(x) of the PAL provisions to require ambient monitoring. EO 12898 is, in part, the impetus for exercising these authorities. In addition, it should be noted that the EO does not prescribe what to do if there is a low income or minority community that is already disproportionately and adversely effected by environmental burdens. The remedy in each case is unique since the environmental factors are unique in each case. In this case, there is no information that would allow EPA to conclude that the NAAQS are protected and, therefore, the ambient monitoring conditions are an appropriate, and legally supportable, remedy.

As the commenter notes, Region 3 stated that there was no other information or data in that permit action that would indicate a need to conduct a more detailed analysis of the impact of the increases from the Capitol Power Plant PAL. Thus, with the Capitol Power Plant PAL, EPA left open the possibility that circumstances could arise in subsequent PAL permits in which there is information or data indicating greater concern and the need for ambient data in the context of the Environmental Justice Executive Order. See EPA Response to Comment 106 as to why the need exists here under the Executive Order. Each EJ analysis, and the measures taken in response to that analysis, is unique to the specific project. See U.S. EPA, Plan EJ 2014 Progress Report (Feb. 2013), available at http://www.epa.gov/environmentaljustice/; see also 78 Fed. Reg. at 27,222 (noting that each permit and community is different and that each EPA regional office has the insight and experience to develop strategies tailored to the particular communities and needs within the region).

Region 2 offers two examples of post-operation ambient monitoring undertaken as a result of an EJ analysis.[6] First, EPA issued a PSD permit to AES Puerto Rico (https://www.epa.gov/sites/production/files/2015-08/documents/aes102920011.pdf) that contained post-operational ambient monitoring requirements due to a possible NAAQS violation noted during the permit review process. We included the ambient monitoring requirements in AES's permit even though we had already determined that the facility's impacts were below the significant impact levels and, therefore, AES was not itself causing or contributing to the possible NAAQS violation. AES installed and operated an ambient SO2 monitor post-

[6] New Jersey's Department of Environmental Protection has also added ambient monitoring into its minor source permit for a proposed Saint Lawrence Cement facility in Camden, NJ because of the degree of uncertainty in estimating some of the PM-10 emissions from the facility.

operational and provided EPA with the measured data in a similar manner to the requirements in Limetree's PAL permit.

Second, in processing the PSD permit for the Energy Answers Arecibo, LLC facility in Puerto Rico (https://www.epa.gov/sites/production/files/2015-08/documents/energy_answers_final_permit_april_20141.pdf), the permittee conducted modeling for lead in the environmental justice review even though lead was not an attainment pollutant in the area where the facility proposed to construct and, therefore, the pollutant was not subject to PSD review. Energy Answers also wasn't subject to nonattainment review for lead because their emissions fell below the major source threshold for lead. Although Energy Answers determined that their impacts were far less than the NAAQS, the facility agreed to install ambient monitors for lead along with conducting a health risk assessment based on concerns under EO 12898. In both of these cases the EAB upheld the Region's environmental justice analysis. See also Responses to Comments 109(b)-(f) and 110.

Comment No. 111(b)
Additionally, the EAB has recognized the adequacy of an EJ analysis based on available monitoring and modeling data, in the Avenal Power Center decision 15 EAB 385, (EAB, August 18, 2011). In that decision, the EAB states that if the permitting agency cannot reach a determinative conclusion in an EJ analysis because of a lack of available data, the Agency is not required to collect additional data in order to address its obligations under the EO. With respect to the Limetree Bay EJ analysis, there is an abundance of available data, including recent air modeling analyses and site-specific monitoring data that Region 2 can utilize in the EJ analysis. Therefore, there is no basis under the EO and EJ analysis to require the collection of additional air quality monitoring data.

Response 111(b)
As the EPA Plan 2014 states, "EPA recognizes that each permit and community is different, and that each EPA regional office has the insight and experience to develop strategies tailored to the particular communities and needs within that region." The lack of data issue in *Avenal* is a different situation than this case and cannot be equated. Petitioners in *Avenal* challenged EPA's determination that "background levels of hourly NO2 in the general area surrounding the facility are not disproportionately high as compared to communities throughout California. *Avenal Power Center*, 15 E.A.D. 385, 399 (EAB 2011). The petitioners argued that EPA should have reached a determinative outcome even in the face of insufficient data, and the Board disagreed. *Id*. at 402. In this permit action, Region 2 has already determined that the South-Central St. Croix community experiences a disproportionate burden. Having found a disproportionate burden, Region 2 has discretion as to how to address the burden. Given EPA's authorities under Sections 114 and 165 of the Clean Air Act and Section 40 CFR § 52.21(aa)(8)(ii)(b)(3) and 40 CFR § 52.21(aa)(7)(x) of the PAL provisions, Region 2 can address the disproportionate burden by requiring ambient monitoring. The EAB will defer to the permit issuer's expertise in the environmental justice analysis. *Id*. at 403. Moreover, the EAB noted in *Avenal* that the Agency intended to site an ambient NO2 monitor in the vicinity of the proposed facility to gather more information about local NO2 concentrations. *Id*. at 403 n.24. In light of Region 2's finding that there is in fact a disproportionate burden in South-Central St. Croix, EPA's incorporation of ambient monitoring requirements in the PAL permit is reasonable and justified. EPA needs the data to ensure that Limetree's operation under the PAL permit does not contravene the NAAQS and jeopardize the public health of the environmental justice community. Moreover, EPA has

authority under Clean Air Act Sections 165(a)(7) and 114, as well as 40 CFR § 52.21(aa)(7)(x), to require ambient monitoring. See also discussion in response to comment 109(b), above, regarding the EAB's deference to the permitting authority in decision-making under EO 12898.

Comment No. 112
The Monitoring Requirements are not based on an accurate characterization of the existing air quality burden in nearby communities. Region 2's rationale for requiring ambient monitoring is also not based on an accurate characterization of the existing air quality burden in nearby communities. Region 2 states that "(t)he industrial nature of this part of St. Croix, compared to other parts of the Island and the rest of the US Virgin Islands, has potentially resulted in a disproportionate burden on these low income and minority residents in the vicinity of Limetree" (emphasis added). Region 2 provides no data that demonstrates there are adverse or disproportionate air quality burdens (i.e., NAAQS exceedances) in these communities. However, Region 2 then states that ambient SO2, NO2, and PM2.5 monitoring requirements are "consistent with EPA's obligations under EO 12898, in light of the burden already experienced by the nearby low income and minority populations" (emphasis added). Region 2 is basing these costly and burdensome monitoring requirements simply on their belief that there may be an adverse and disproportionate burden in the area, even though air quality modeling and ambient monitoring data demonstrate there is no adverse burden in the area. This is an unsupported and arbitrary assumption by Region 2 without any factual basis.

Response 112
The commenter's reference to EPA's language ("has potentially resulted in a disproportionate burden") is from the Fact Sheet. The Fact Sheet discusses EPA's process in conducting the environmental justice analysis and states that the industrial nature of the Island "potentially resulted" in a disproportionate burden on the low income and minority residents. This is, in part, why EPA went forward with an environmental justice analysis, including the modeling. The EAB has "encouraged permit issuers to examine any "superficially plausible" claim that a minority or low-income population may be disproportionately affected by a particular facility." *In re EcoEléctrica, LP*, 7 E.A.D. 56, 69 n.17 (EAB 1997) (citing *In re Chem. Waste Mgmt.*, 6 E.A.D. 66, 75 (EAB 1995); *In re Envotech, L.P.*, 6 E.A.D. 260, 280 (EAB 1996)); *see also In re Shell Gulf of Mex., Inc. & Shell Offshore, Inc.*, 15 E.A.D. 103, 148 (EAB 2010).

After examining all of the information and data at the end of the process, EPA concluded that there was indeed a disproportionate burden. This is reflected in the EPA-Limetree EJ Analysis wherein the term "potentially" is not used. As stated in the EPA-Limetree EJ Analysis, the environmental burden in Region 2's analysis is not limited to the status of the NAAQS which showed violations, but to the multitude of environmental burdens experienced by the community nearby such as the St. Croix Renaissance Industrial park that was recently reported to cause health issues due to irritants from Red Mud, odor complaints from sources in the area that resulted in the closing of nearby schools, fires from the Anguilla landfill, proximity to a waste water treatment plant, noise and traffic issues associated with the nearby Henry E. Rohlsen Airport, and emissions from large ships docked at its coast. This kind of multi-factor analysis of all the environmental burdens, not just air quality related burden, is how Region 2 has conducted all of its environmental justice analyses under the Clean Air Act. In fact, EPA's screening tool under EO 12898, EJ Screen,[7] includes a wide variety of multi-media environmental indicators to

[7] EPA did not use EJ Screen in this case because the data does not exist for it in the Virgin Islands. However, EPA was still able to conduct a multi-factor analysis specifically tailored for St. Croix.

assess the environmental burden on the community. All of these factors lead to the conclusion that that the South-Central St. Croix area experiences a disproportionately high and adverse environmental burden.

Comment No. 113. The Monitoring Requirements do not properly consider the EJ air quality modeling analysis

Comment No. 113(a)
Limetree Bay voluntarily performed an extensive EJ modeling analysis for the 1-hr SO2 and NO2 NAAQS, and the 24-hr and annual PM2.5 NAAQS, at and under Region 2's direction. See email from Annamaria Colecchia to Mark Podrez dated 5/16/2019, EPA-R02-OAR-2019-0551-0063, transmitting EPA's comments on Limetree Bay's proposed modeling protocol; see also email from Mark Podrez to Annamaria Colecchia dated 6/17/2019, EPA-R02-OAR-2019-0551-0068, transmitting the modeling results and Environmental Justice Analysis Air Modeling Report, dated June 2019, EPA-R02-OAR-2019-0551-0060. That modeling analysis was based on procedures recommended by EPA for the 1-hr SO2 NAAQS Designation modeling and evaluated impacts not only in nearby communities, but at all ambient air locations on St. Croix. The EJ modeling analysis demonstrated there would not be any NAAQS exceedances nor adverse impacts at any location in St. Croix.

In the EPA-Limetree EJ Analysis, Region 2 notes that deriving short term actual emission rates (required for the 1-hr and 24-hr modeling analyses) from the annual PAL limits "requires a number of assumptions which leads to uncertainty in the outcome". Therefore, Region 2 effectively dismisses the modeling analysis conclusions and believes that the "uncertainty" in the modeling analysis warrants imposing the extensive ambient monitoring requirements. But these limitations were known going in and EPA developed the modeling protocol with these limitations in mind. The fact that the modeling results do not support EPA's monitoring goals does not justify calling them uncertain and abandoning them.

Response 113(a)
Region 2 required the modeling analysis as a condition of our December 28, 2018 completeness determination because we had concerns about the environmental justice community on St. Croix and needed the modeling analysis to properly carry out our responsibilities under the EJ Executive Order. Region 2 is required to carry out the EJ Executive Order for any permit that we issue under 40 CFR § 52.21. See EPA Response to Comments 109(b) and 116. Prior to issuing the completeness determination, Limetree had indicated a willingness to conduct the modeling analysis. EPA's completeness determination stated that EPA reserves the right to ask for information demonstrating that the PAL permit, if issued, would meet, among other things, Executive Order requirements. Region 2 agrees that EPA provided assistance to Limetree in the modeling analysis. Region 2 has always provided guidance to all applicants in order to obtain the most technically sound air quality analysis that is in accordance with Agency policy and regulations. In this case, Limetree understood from the outset that due to the different operational configurations it would be difficult to capture all worst-case scenarios given the nature of a PAL. But we agreed to attempt an analysis that was representative of at least the most plausible operating configuration, that is, the operating configuration used by HOVENSA during the baseline years because it would at least provide a general idea of the impact locations.

EPA suggested using hourly heat input rates measured by the CEMs and applying a professional engineering calculation for determining a plausible short-term emission rate for each unit. EPA suggested this possibility because it is a method found in 40 CFR § 51, Appendix W, Table 8-2. However, Limetree later informed EPA that they did not have hourly heat input rates measured by the CEM for each unit because HOVENSA had not archived much of the short-term data. As a result, Limetree only had very limited data from a limited number of units. Therefore, Limetree proposed, as the only alternative, to extrapolate from long-term rates to hourly rates for a few units and then further extrapolate this data to represent other units. This extrapolation is problematic because extrapolating from one unit to another leads to inaccuracies since emission rates are not uniform from one unit to the next. This is in addition to any operational variation that Limetree will have under the PAL.

Without the short-term data, Limetree could not provide the magnitude of the worst-case impacts. EPA had expected to receive, in the development of the protocol, all the data necessary to run the model. Since the data was missing, EPA entertained other methods to determine the actual hourly emission rate. However, those methods did not appear to be mathematically correct. Nonetheless, we indicated to Limetree that they could go ahead with the modeling approach they proposed while articulating our concerns that the modeling results might not be accurate. At the time we indicated that Limetree could go forward with the modeling, EPA had already begun discussions with Limetree about conducting ambient monitoring due to the concerns we expressed about the deficiencies in the modeling approach.[8]

Comment No. 113(b)
It must be noted that EPA has developed nationwide guidance on these same types of short-term emission rate calculations as part of the 1-hr SO2 NAAQS Attainment Designation process (see in particular Appendix B in the EPA memo "Guidance for 1-Hour SO2 Nonattainment Area SIP Submissions", from Stephen Page to Regional Air Division Directors, April 23, 2014). EPA's guidance includes methods for converting long-term average emission limits to "comparably stringent" short-term emission rates, and these same methods were used by Limetree Bay in the EJ modeling analyses.

This EPA guidance has been utilized in numerous 1-hr SO2 modeling analyses that have formed the basis for designation of nonattainment areas throughout the US, even though there are "uncertainties" in those modeling analyses. In Appendix B of the Page memo, EPA acknowledges some of the emission rate calculation uncertainties and states:

[8] The initial discussions about resuming the ambient monitoring networks began in early 2019. On May 7, 2019 Limetree sent a draft ambient monitoring approach to EPA. However, that approach addressed only SO2 in limited locations and circumstances. EPA did not agree with the limited nature of Limetree's ambient monitoring approach and, on July 18, 2019, EPA responded with a draft approach (July 18 draft) that included ambient monitoring requirements at mostly the same 5 original HOVENSA SO2 locations with one station to be relocated to the "peak" area, and for the addition of NO2 and PM2.5 as well. As there was no response to EPA's draft approach from Limetree for weeks, EPA arranged a conference call with Limetree's representatives to discuss the matter on August 20, 2019 during which EPA made clear that EPA was getting very close to issuing a proposed permit decision and, therefore, any response to EPA's approach would have to be provided by Limetree "ASAP." EPA waited one additional month after August 20, 2019 for Limetree to respond to the July 18 draft but did not receive a response. EPA sought to issue a draft permit in a timely manner given that Limetree had made repeated requests of EPA Headquarters offices and the Region to expedite issuance of the draft permit. After two months had passed since Limetree received EPA's approach without providing any response, EPA proceeded to incorporate Region 2's July 18 draft approach into the September 20, 2019 draft permit.

The EPA acknowledges that even with an adjustment to provide this comparable stringency, a source complying with a longer-term average emission limit could possibly have hourly emissions which occasionally exceed the critical emission value (CEV). An hour where emissions are above the critical value does not mean that a NAAQS exceedance is occurring in that hour. Indeed, the guidance states that "if periods of hourly emissions above the CEV are a rare occurrence at a source, these periods would be unlikely to have a significant impact on air quality, insofar as they would be very unlikely to occur repeatedly at the times when the meteorology is conducive for high ambient concentrations of SO2".

Response 113(b)
First, the April 23, 2014 document referenced in this comment was "intended to provide guidance and recommendations to state, local and tribal governments for the development of state implementation plans (SIPs) and tribal implementation plans (TIPs) under the 2010 1-hour primary National Ambient Air Quality Standard for Sulfur Dioxide (S02 NAAQS)." The guidance document was intended for developing nonattainment SIPs. The guidance references a method that could be used to establish a permit limit after the SIP modeling is done with the hourly emission rate. It is not a means for developing an hourly emission rate used in modeling, and it was not intended for all pollutants. Further, the guidance states that "[t]his guidance document imposes no binding or enforceable requirements or obligations on any person and is not final agency action."

Nevertheless, the comment incorrectly interprets the method referenced in the guidance. Appendix C of the guidance provides a method where a 1-hour CEV per emission source, analogous to a 1-hour limit that protects the NAAQS and is predetermined through an air quality dispersion modeling analysis, can be converted to a "comparatively stringent" longer term average emission limit. The guidance provides for a longer-term average emission limit of up to 30-days. The method is dependent on the known and established variability of 1-hour emissions by the individual source to develop an adjustment factor, based on the form of the 1-hour SO2 standard and the longer-term averaging period, that is applied to the 1-hour CEV to get a comparably stringent longer-term average emission limit. The method in the guidance is certainly not intended to convert a long-term average to a short-term average, especially not from an annual average to an hourly emission rate. It would be mathematically inaccurate to do so since longer term averages are a function of their short-term variability. Even if a uniform short term emission rate is assumed, it would be an incorrect assumption in this case since the emissions under a PAL are not uniform at all units, and at all times, and an accurate modeled assessment of the NAAQS could not be achieved in this manner.

Regarding the quote in the comment, "if periods of hourly emissions above the CEV are a rare occurrence at a source, these periods would be unlikely to have a significant impact on air quality, insofar as they would be very unlikely to occur repeatedly at the times when the meteorology is conducive for high ambient concentrations of SO2", this too is taken out of context. The sentence relates to the fact that an air quality concentration is not simply a function of emissions alone but also a function of other parameters such as the meteorological conditions when those emissions occur. The sentence also refers to "rare" occasions when a short-term emission rate may exceed its limit as opposed to routine exceedances due to variable emissions. In sum, the guidance cited is not applicable to Limetree's situation.

Comment No. 113(c)
All air quality modeling analyses have some degree of uncertainty resulting from calculations and assumptions on the emission rates modeled as well as uncertainties on the representativeness of meteorological and background air quality data. The Limetree Bay EJ modeling analysis used multiple years of site-specific meteorological and site-specific background air quality data, which is undeniably the "best practice" for air modeling. The emissions modeled were based on an analysis of hourly CEMS and heat input data for representative types of emission units and followed the 1-hr SO2 attainment modeling guidance methodologies.

Response 113(c)
EPA agrees that there is some inherent uncertainty in all modeling due to the accuracy, precision, and representativeness of the data input into the model. The model itself in this case is fine since it is the EPA preferred refined model, AERMOD. However, the model results, including those derived from an EPA preferred refined model, are only as good as the accuracy, precision and the representativeness of its data inputs. In this case, most of the short-term emission rate data was missing. Large amounts of missing data go beyond accuracy and precision of the data. Limetree had only very limited short-term emission rate data and, as a result, input mostly extrapolated emission rate data into the model. These inputs were inaccurately estimated which go beyond the acceptable level of uncertainty in any modeling analysis. Emission rates were only available for a few turbines, boilers, and heaters. Those emission rates were then extrapolated to the other units assuming the same uniform emissions with no consideration given to the possibilities that those units may increase the short-term peaks allowed under the annual PAL limits. In addition, an annual emission rate was used to approximate a short-term emission rate on the assumption of a linear relationship which is not mathematically accurate and cannot assure compliance with the short-term NAAQS. While the PAL provisions assume some level of uncertainty due to the variety of possible operating configurations and emissions variations across the emission points, the assumptions inherent in Limetree's modeling analysis result in an unacceptable level of uncertainty that has caused EPA to require ambient monitoring in the PAL permit. See also EPA Response to Comment 114(a).

Comment No. 113(d)
In summary, the uncertainties in the Limetree Bay air modeling analysis were known going in and are no more or less reliable than any other modeling conducted by EPA for other short-term NAAQS modeling analyses. Region 2 should place more weight on the EJ modeling analysis conclusion that there are no adverse impacts in the area and should not require extensive ambient monitoring under the overly simplistic rationale of addressing model "uncertainties".

Response 113(d)
EPA strongly disagrees that the modeling uncertainty is no different than any other modeling results and that the uncertainty in this case was known going in. We were unaware that the emission information was missing. In other modeling results, the short-term mass emission rates for each unit are known quantities and input into the model. The operating configurations of each unit are known quantities and input into the model. Those emission rates and configurations are then incorporated into the permit as enforceable limits. In this case, general assumptions were made such as the extrapolation of a short-term emission rate from the annual average. However, EPA cannot make general assumptions that the health-based NAAQS are protected. Therefore, EPA cannot rely on Limetree's EJ modeling analysis conclusions. The appropriate alternative to

assure compliance with the NAAQS is to require an ambient monitoring network, specific to Limetree's impacts. See also EPA Response to Comments 106, 112 and 113(a)-(c).

Comment No. 114. The Monitoring Requirements do not properly consider existing monitoring data

Comment No. 114(a)
Limetree Bay analyzed the large amount of available SO2, NO2, and PM2.5 site-specific monitoring data in the area as part of the EJ analysis. Monitoring for SO2 near the refinery has been performed since the 1980s, most recently at five stations located surrounding the Limetree Bay facility. In addition, HOVENSA collected NO2 monitoring data at two of these stations for the period 2006-2008, and the DPNR has been collecting PM2.5 data at a station located downwind from the refinery since at least 2002. This is a very extensive set of monitoring data focused on evaluating impacts from refinery operations that are adequate for performing an EJ analysis.

Response 114(a)
The monitors referenced by the commenter were in existence prior to the promulgation of the 2010 NAAQS which is the issue here. EPA notes that it is only requiring that one of the five SO2 monitor locations be moved to the peak location for 1-hour SO2 and adding two NO2 and one PM2.5 monitors in their respective peak locations. The other four SO2 monitors will be located at the previously established existing locations. Some of the data referenced by the commenter measured violations and exceedances of the SO2 NAAQS, in particular, in 2009 and 2010. There currently are no ambient air monitoring data that could be used to compliance with the SO2, NO2, and PM2.5 NAAQS or to address the intent and purpose of 40 CFR § 52.21(aa)(8)(ii)(b) once the refinery reopens. HOVENSA shut down the five SO2 monitors in 2012 with the commitment to restart the monitors if the refinery restarts in the future (see April 26, 2012 letter from HOVENSA and EPA's response in May 30, 2012).

The measured data that existed prior to the shutdown was considered by EPA and Limetree but found to have issues as noted below and was one reason why Limetree's resulting EJ modeling analyses was unreliable. Further, the SO2 ambient monitor measured violations of the 1-hour SO2 NAAQS prior to HOVENSA's shut down. The NO2 monitors were voluntarily installed by HOVENSA without EPA's approval for regulatory use to assess the annual NO2 impacts. The NO2 monitors were not in the area of maximum impacts for the 1-hour NO2 NAAQS. In addition, the NO2 data at Station 5 omitted a significant amount of data from 2007. Therefore, since the 1-hour NO2 NAAQS is based on a 3-year average, there is insufficient data to calculate a design value of the 1-hour NO2 NAAQS. EPA does not have information regarding the quality of the NO2 data measured at these stations or of the 1-hour NO2 NAAQS since the monitors were installed by HOVENSA for the annual average NO2 NAAQS. The Bethlehem Village monitor for PM2.5 is not in a location that would capture Limetree's maximum impacts with respect to the 24-hour PM2.5 standard. See also EPA Response to Comment 114(c).

Lastly, none of the above ambient monitors are sited in the area where in general one could expect the Limetree-specific peak impacts of the 1-hour SO2, 1 hour NO2, or the 24 hour PM2.5 concentrations to occur based on the operating scenario modeled in Limetree's EJ analysis. Therefore, EPA is requiring that one of the monitoring locations be moved to the peak impact areas.

Comment No. 114(b): SO2 Data Analysis
More than 30 years of ambient SO2 monitoring data at the various stations is already available in EPA's Air Data database. This includes recent data right up to the refinery ceasing operation in early 2012, and the 1-hr SO2 design concentrations for the period immediately before ceasing (the 3-year period 2009-2011) has been compared to the 1-hr SO2 NAAQS. At station 1, the design concentration was 96% of the NAAQS, and at the other four sites the measured concentrations ranged from 50% down to 13% of the NAAQS. See, SO2 Design Value Analysis 2007-2014, EPA-R02-OAR-2019-0551-0096, page 4 of 8. (Note: this is the design value period used by EPA and DPNR for designating attainment with the 1 hr. SO2 standard. This was for a period when the full refinery was operating, with actual SO2 emissions during 2009-2011 of 2,700 tpy versus the proposed PAL SO2 limit of 1,626 tpy. Considering that the proposed PAL limit is 40% lower than actual emissions during the monitoring data period (future operations under the PAL including lower fuel oil sulfur content limits and the elimination of the incineration of sulfur plant emissions when the tail gas control unit is inoperative), the available monitoring data indicates that future operations under the PAL permit will not pose a threat to the 1-hr SO2 NAAQS. See, SO2 Design Value Analysis 2007-2014, EPA-R02-OAR-2019-0551-0094; 2010 to 2013 SO2 Monitoring Data, EPA-R02-OAR-2019-0551-0096; Environmental Justice Analysis Air Modeling Report, EPA-R02-OAR-2019-0551-0060, Section 7.2. (Note: Monitoring data for each monitor for the years 2010 to 2013 can be found in EPA-R02-OAR-2019-0551-0096. For 2009 data, refer to EPA-R02-OAR-2019-0551-0094, page 4 of 8, third column.)

Region 2's EJ analysis stated that there were measured design value violations of the 1-hour SO2 NAAQS both in 2009 and in 2010 at Station 1, and that there were exceedances of the 1 hour SO2 NAAQS at Station 2 and 3 in 2008, 2009, and 2011. These statements are misleading for several reasons. First, SO2 emissions from Limetree Bay's operations will be 40% lower than HOVENSA's due to the smaller footprint of the project and new applicable requirements that have come into effect since 2008-2011 including NSPS Subpart Ja and lower fuel oil sulfur limits. Second, even with respect to HOVENSA's operations, EPA's statement is misleading because the 1-hr SO2 NAAQS was not even effective until August 2010, and it is not appropriate to compare older, historical monitoring data to a new NAAQS. Third, based on the data presented in the docket, there were no exceedances of the 1-hr SO2 NAAQS at Station 2 and 3 for any year (i.e., the 99th percentile daily 1-hr maximum concentrations at these stations are not above the NAAQS concentration), and the design concentrations never exceeded approximately 60% of the NAAQS. See, SO2 Design Value Analysis 2007-2014, EPA-R02-OAR-2019-0551-0094; 2010 to 2013 SO2 Monitoring Data, EPA-R02-OAR-2019-0551-0096; Environmental Justice Analysis Air Modeling Report, EPA-R02-OAR-2019-0551-0060, Section 7.2.

Response 114(b)
In assessing the need for post operational ambient monitoring, EPA reviewed the measured ambient concentration for several years just prior to shutting down the ambient monitors in 2012 (i.e., 2008 to 2011). In each year the design values were different as one would expect. However, in 2009 and 2010 EPA identified two violations of the 1-hour SO2 NAAQS at Station 1. Further, in 2008, 2009, and 2011 there were measured exceedances of the 1-hour SO2 NAAQS at Station 2 and Station 3. This is contained in the docket at EPA-R02-OAR-2019-0551-0094. Commenter has not provided support from the docket or any other source for its claim that there were no exceedances of the 1-hour SO2 NAAQS at Station 2 and 3 for any year. In fact, as noted, EPA

found exceedances or violations of the NAAQS during 4 successive years. Thus, EPA did not restrict the evaluation to a single preceding year that could be an anomaly but looked at a representative set of years since it is understood that each year could be different given different emission scenarios and different meteorology.

We understand that the 1-hour SO2 NAAQS was not in effect prior to August 2010 but the violations measured by the ambient data demonstrates the need to be cautious moving forward especially since the impacts from the refinery operating under the PAL could not be modeled accurately.

Since the commenter referred to the 30-year period, it should be noted that, hypothetically, if the 1 hour SO2 NAAQS had been in effect since 1983, the HOVENSA monitoring data indicate that the measurements (design values) from 1985 through 1988, 1992-1994, and 2000 through 2006 would have been over 75 ppb, the standard for the 1-hour SO2 NAAQS. EPA already demonstrated violations in 2009 and 2010 (in design value years) and used this more recent, representative period to determine that post operational ambient monitoring is warranted in this case. Even the 2011 design value year referenced by the commenter is 72 ppb which is marginally close and does not offer enough assurance that the NAAQS will continue to be met.

Regarding the reference to EPA-R02-OAR-2019-0551-0096, which is an AMP450NC report, the report contains maximum and mean values data from 2010-2013 and is not an SO2 design value report. Page 4 of the document lists SO2 collection methods used in the generation of the AMP450NC and not design value information. EPA-R02-OAR-2019-0551-0094 is a design value report from 2009-2014. EPA-R02-OAR-2019-0551-0094 shows 99th percentile values in excess of 75 ppb for 2008, 2009, and 2011 and design values of greater than 75 ppb for 2009 and 2010.

For designation purposes, USVI was designated " attainment/unclassifiable" since these areas were not required to be characterized under 40 CFR § 51.1203(c) or (d) and the EPA does not have available information including but not limited to appropriate modeling analyses and/or monitoring data that suggests that the areas may (i) not be meeting the NAAQS, or (ii) contribute to ambient air quality in a nearby area that does not meet the NAAQS. EPA did not have the modeling or monitoring, hence the classification. The commenter's note in the parenthetical addressing EPA-R02-OAR-2019-0551-0096 is incorrect as the area is designated as "attainment/unclassifiable."

Regarding the comment that Limetree will be emitting 40% less than HOVENSA (note that Limetree references a 70% reduction elsewhere in their comments), it appears that Limetree is basing this level of reduction on an inappropriate comparison between the potential to emit prior to HOVENSA's shutdown and the PAL level. In fact, Limetree's PAL levels in the permit are based on HOVENSA's actual emissions in 2009 to 2011 plus the significant emission level under 40 CFR § 52.21(b)(23) for each PAL pollutant. The 2009-2011 timeframe is the period when some of the SO2 NAAQS exceedances and violations were measured, so there is significant risk of an exceedance and violation because Limetree's PAL level is similar to the actual emissions when the exceedances and violations took place. Therefore, we do not agree that reductions below HOVENSA's historic allowable emissions has any relevance to the question of whether Limetree's emissions might cause or contribute to a violation of the SO2 NAAQS.

Comment No. 114(c): PM2.5 Data Analysis
PM2.5 monitoring is already being performed by DPNR at the Bethlehem Village Housing monitoring station, in a community located in a predominately downwind direction from Limetree Bay. The design concentrations for the recent data period 2015-2017 for the 24-hr and annual averages are approximately 54% and 64% of the 24-hr and annual NAAQS. Limetree Bay also evaluated PM2.5 data for the last 3 years when the HOVENSA refinery was in operation, 2009-2011, and found that the design concentrations were similar between the 2009-2011 and 2015-2017 periods. This data indicates that the PM2.5 monitoring data is consistent over this time period, and that there are no adverse PM2.5 burdens. In addition, PM2.5 emissions will not increase relative to HOVENSA's operations.

Response 114(c)
The PM2.5 ambient monitor in Bethlehem Village is expected to continue to operate and will be a good resource for evaluating the NAAQS on St. Croix especially the annual average PM2.5 NAAQS. However, this monitor is not located in Limetree's maximum impact area for the 24-hour PM2.5 NAAQS and, therefore, is not representative of Limetree's maximum 24-hour average impacts. While we do not know the percentage of the 24-hour NAAQS that we would expect at the peak location, we do know that it is likely to be higher than 54% of the 24-hour NAAQS measured at the Bethlehem Village monitoring station. Due to the uncertainty in Limetree's modeling, we do not know what the impacts would be at the peak location. This is why we are requiring an ambient monitor for PM2.5.

Comment No. 114(d): NO2 Data Analysis
NO2 monitoring was previously performed by HOVENSA at Stations 2 and 5 for the time period 2006 through 2008 using EPA equivalent monitors and in accordance with the projects Quality Assurance Project Plan (QAPP). EPA Region 2 conducted annual quality assurance audits of these monitors, and the systems passed the audits. This data was used by Region 2 in PSD permits air quality analyses for HOVENSA. Although the data was never required to be loaded and certified into the EPA AQS data base, that does not indicate that the data is inaccurate or questionable. The maximum monitored 1-hr NO2 impact was measured at Station 2 and was 40% of the NAAQS, which is a large compliance margin. And, as reflected in the company's PAL application, NOx emissions from Limetree Bay's operations will be 33% percent lower than the actual emission during 2009-2011 when HOVENSA operated the refinery.

Response 114(d)
This data was not relied upon by EPA for any HOVENSA permit since it was not approved for regulatory purposes. While EPA inspectors performed some audits, the monitors were not sited for determining maximum impacts, especially not the 1-hour NO2 impacts since this NAAQS was not yet promulgated. The 40% of the NAAQS reference in the comment is derived by taking one-hour readings from the annual monitor but EPA never evaluated the data for the annual or one-hour standard. The monitors were sited by HOVENSA to determine an annual average background concentration and ambient ratios of NO2/NOx that were needed to calculate the annual average NO2 concentrations. HOVENSA voluntarily installed the monitors since, at the time, EPA only had a single default ambient NO2/NOx ratio of 0.75 in EPA modeling guidelines for determining annual NO2 concentrations, which HOVENSA contend to be too conservative. HOVENSA wanted to demonstrate a better ratio. However, the recalculated ratio was not used for any regulatory purposes by EPA since the siting of the monitors did not undergo proper

regulatory review and EPA could not conclude that the monitor was in the maximum impact location.

Comment No. 114(e): Summary of Monitoring Data Analysis
In summary, the ambient monitoring data collected immediately before the refinery ceased operating indicates that there were no NAAQS exceedances[9] or adverse SO2, NO2, and PM2.5 impacts occurring in nearby communities on St. Croix when HOVENSA was operating the refinery. As the draft PAL permit reflects, SO2 and NOx emissions from the refinery under the PAL will be 40% and 33% lower, respectively, than the actual emissions that occurred during 2009-2011. Given these emission reductions under the draft PAL permit (compared to the emissions prior to refinery ceasing operation when the monitoring data was collected), there is no reason to expect that Limetree Bay's operations will approach the prior monitoring levels or cause a NAAQS exceedance. The available data is more than adequate for the EJ analysis, and there is no reasonable technical justification to require additional air monitoring.

In its EJ analysis, Region 2 states that there is "uncertainty" in the background monitored measurements. As an example, Region 2 states that for SO2, "the 10 month comparison of monitored data from April 2012 to February 2013 may not be sufficient to conclude that the monitors measured adequate concentrations to be able to properly characterize the background contributions that require 3 years of data for NAAQS compliance". This statement does not accurately describe the basis of the background SO2 data. Data from Station 5 for the three-year design concentration period from 2010 to 2013 were used as background data, not 10 months of data. EPA states that the NO2 monitored data was not certified by Region 2 or DPNR but does not describe how the monitors passed all Region 2 audits, and operations followed a detailed QAPP. Finally, EPA states that the PM2.5 data had low data capture but does not describe how it was adjusted using standard procedures in 40 CFR § 50 Appendix N to address the low capture rates.

Response 114(e)
Each comment in the summary has been responded to above, except for the statement concerning adjustments for low data capture for PM2.5. EPA did not rely on the existing PM2.5 monitor data at the Bethlehem Village monitor because it had low data capture. The EPA does not perform "adjustments" when there is low data capture and, more broadly, EPA does not adjust data that states submit to the Agency. The commenter has not identified any specific language in Appendix N that would provide for adjustments to address low data capture. The comment may be referring to 40 CFR § 50 Appendix N 4.2(c) which provides criteria for when the EPA may consider 24-hour PM2.5 NAAQS design values as valid even though completeness criteria is not met. However, this language in Appendix N 4.2(c) is not applicable in a PM2.5 24-hour NAAQS design value that is equal to or below the level of the NAAQS and can be validated if it passes the maximum quarterly value data substitution test. In order to apply this test, there needs to be at least 50 percent data capture in each quarter that has less than 75 percent data capture. If any quarter has less than 50 percent data capture the data substitution test cannot be used. In 2011 there were 2 quarters with less than 50 percent data capture at the PM2.5 monitor referred to by

[9] The refinery cease operating in early 2012, therefore the 1-hr monitoring design concentration period that is most representative of recent refinery operations is 2009-2011. The Station 1 1-hr SO2 design concentration for 2008-2010 was 106% of the 1-hr SO2 NAAQS, however the final design concentration for 2009-2011 that was used for 1-hr SO2 NAAQS attainment designation purposes was 96% of the 1-hr SO2 NAAQS.

the commenter, which prohibits the use of the data substitution test. Note also that EPA did not rely on the 2009-2011 for attainment designations.

Comment No. 114(f)
EJ modeling analyses typically do not have the large amount of available site-specific meteorological and ambient air quality monitoring data as in this case. The available monitoring data is adequate and reduces uncertainties in the EJ analysis, and there is no need to collect additional ambient data in order for Region 2 to fulfill obligations under EO 12898.

Response 114(f)
EJ modeling is not held to a lower standard than any other modeling used for regulatory purposes. In each of Region 2's Clean Air Act EJ modeling analyses since the 1994 EJ Executive Order was issued, we have applied the same rigor as we have done with the non-EJ modeling analyses. Despite having site-specific meteorological data, the short-term emissions from Limetree and the ambient data that would affect modeled impacts results relevant to the short-term NAAQS are unknown.

Comment No. 115
The list of PAL Permit Units in the Appendix to the draft PAL permit must be revised to include TK-7510 as represented in the PAL permit application.

Response 115
EPA has revised the Appendix to the PAL Permit to include TK-7510 unit as represented in the PAL permit application.

Comments from Citizens/Environmental Groups –
Air Quality, Ecosystems, Environmental Justice, and Public Health & Safety

Comment No. 116
Permit should be denied due to adverse impacts and likely violation of federal and territorial environmental laws.

Response 116
The commenter did not provide specific information about the adverse impacts of concern or the laws that the commenter believes might be violated, so it is not possible to provide a specific response. However, EO 12898, entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations" (February 11, 1994), directs federal agencies to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low income populations in the United States and its territories. EPA Region 2's Interim Environmental Justice Policy directs the Region to apply EO 12898 to "permitting decisions that include new major permits, significant permit modifications, or major permit renewals." EPA Region 2 Interim Environmental Justice Policy at 26 (Dec. 2000). EAB has determined that EO 12898 applies to permits under 40 CFR § 52.21. See EPA Response to Comment 109(b). As discussed in Response to Comment 118, EPA's Environmental Justice analysis could not conclude that the NAAQS are protected, which is why the permit contains conditions for ambient monitoring which will assess whether there are exceedances or violations of the health-based NAAQS, consistent with the PAL regulatory provisions at 52.21(aa)(7)(x) and 40 CFR § 52.21(aa)(8)(ii)(b)(3) and other Clean Air Act Authorities. See detailed explanation in EPA Response to Comment 106 and 108. In addition, the permit has been processed in accordance with the public procedures of 40 CFR § 124 and is consistent with the requirements of the PAL provisions at 40 CFR § 52.21(aa). With respect to territorial environmental laws, DPNR is the permitting authority, not EPA.

Comment No. 117
Make all emissions data available to the public online and in written reports in both English and Spanish. All Limetree documents must be translated into Spanish and French Creole to meet accommodations for individuals with Limited English Proficiency. There is no indication that EPA provided materials nor made public meeting accommodations for individuals with Limited English Proficiency (LEP). EPA should extend the public comment period for at least another 45 days in order to allow the USVI's significant LEP population appropriate time to evaluate and comment on the Draft Permit, and provide an additional, multi-lingual public information session within this extended comment period. This is additionally necessary because of new information about continuing impacts of Limetree's polystyrene pollution incident.

Response 117
EO 13166, *Improving Access to Services for Persons with Limited English Proficiency*, 65 Fed. Reg. 50,121 (Aug. 16, 2000), directs federal agencies to develop and implement a plan to

provide services to Limited English Proficiency (LEP) individuals and to ensure meaningful access to programs and activities conducted by federal agencies. EPA's LEP Order, *Compliance with Executive Order 13166: Improving Access to Services for Persons with Limited English Proficiency*, issued on July 28, 2011, and updated on Feb. 10, 2017, sets forth the EPA's expectations and requirements to ensure compliance with EO 13166. The LEP Order provides an explanation of how EPA Headquarters and regional program offices can assess the need to provide oral and written services in languages other than English through a balancing of four-factors (1) the number or proportion of LEP individuals in the eligible service population, (2) the frequency with which LEP individuals come in contact with the program, (3) the importance of the service provided by the program, and (4) the resources available to the EPA. EPA must provide meaningful access to any LEP individual; however, the balancing of these factors will assist programs to determine the appropriate means or method by which to achieve that result.

EPA provided a public availability session on November 7, 2019 followed by the public hearing on November 8, 2019 in St. Croix, VI. The public availability session was an informal opportunity open to the public to learn about the draft PAL permit and make more informed official comments during the public comment period and public hearing. The Feb. 10, 2017 EPA LEP Order states that, "at the first point of contact with a LEP individual, EPA staff will make an initial assessment of the need for language assistance services." EPA LEP Order at 7. However, EPA was not made aware before or during either the public availability session or public hearing that there were LEP individuals in need of translation, so the Agency did not have an opportunity to make the assessment with respect to oral translation. No comments either verbally or orally at the hearing or any communication requests were received in any language besides English or from people with LEP. The Feb. 10, 2017 EPA LEP Order further states that with respect to documents intended for public outreach or a broad audience, EPA should translate vital documents only "where a significant percentage of the population…likely to be directly affected" are of limited English proficiency. Id. at 11. According to the 2000 US Census, 0.7% of the USVI population speak English "not at all" and 2.8% of the population speak English "not well." The 2000 Census also reveals that in Southcentral St. Croix, 98.8% of French and French-Creole speakers speak English at least "very well" and 89.5% of the Spanish speakers speak English at least "very well."

Keeping in mind the very low proportion of LEP population in the USVI and other factors listed above, EPA has not translated the written reports and emissions data or extended the public comment period. See also EPA Response to Comment 121, below, regarding extension of the public comment period. The polystyrene incident, referenced in the comment, was raised by commenter in the context of Endangered Species Act (ESA) concerns. As discussed in EPA Response to Comment 123, the nature of the PAL permit is such that the PAL will not increase the likelihood of polystyrene pollution nor does it implicate such pollution in the ESA analysis which is based on potential air emissions impacts on the species. Therefore, polystyrene pollution is not a basis for extending the public comment period.

While it is unclear which specific documents the commenter believes EPA should have translated, EPA notes that, in addition to the EPA LEP Order which does not call for translation in this case, the Region 2 Policy on Translations & Interpretations, Order No. R-1500.1 does not provide for translation of legally binding documents or detailed and lengthy technical documents, such as the draft PAL permit and PAL application, because of the potential for introducing ambiguity or confusion about the intended meaning of the document.

Although EPA has not provided translation given the specific facts of this permit action, some of the data requested by the commenter will be made available online. See EPA Response to Comment 119, below.

Comment No. 118
The Environmental Justice analysis is ambiguous and fails to even mention public health impacts. The Draft Permit presents serious Environmental Justice (EJ) issues: the EJ modeling is uncertain, proposes insufficient mitigation measures, and does not mention public health impacts.

Response 118
As discussed in detail, below, the EPA-Limetree EJ Analysis, does indeed address public health because it examines the impact of the facility on the National Ambient Air Quality Standards (NAAQS), which are health-based standards. When Congress passed the Clean Air Act in 1970, they required EPA to set the NAAQS at a level that will protect public health with an adequate margin of safety; as such, the NAAQS are health-based air quality standards. This requirement was established with no regard to cost. Therefore, in accordance with the Clean Air Act, EPA developed "criteria" documents that represent a compilation and scientific assessment of all the health and environmental effects information available and further consulted with the Clean Air Scientific Advisory Committee (CASAC) in setting the standards. CASAC is a Congressionally mandated group of independent scientific and technical experts. With CASAC, EPA developed criteria documents for each NAAQS that provide an analysis of sensitive populations such as children, the elderly and asthmatics. The health-based NAAQS, therefore, are not only protective of the general population but consider sensitive populations.

However, we agree that the results of Limetree's June 2019 EJ modeling analysis are uncertain. The EPA-Limetree EJ Analysis outlines the reasons why the modeling results are uncertain. See also EPA Response to Comment 106. This is the reason why we are requiring ambient monitoring in the PAL permit as a strategy under the EJ Executive Order and in accordance with the PAL regulatory provisions and the Clean Air Act.

Limetree modeled one operating scenario. There was enough certainty in this one scenario to approximate the general location of peak impacts since that emission scenario was based on the same operating configuration used during the PAL baseline period. This configuration could serve as an approximation of the location of the impacts including the peak impacts. However, even with the one emissions scenario, the magnitude of the impacts remains uncertain. Further, given that different operating scenarios under different wind conditions lead to different impact locations, a network of ambient monitoring surrounding the vicinity of the facility is the optimum way to assess compliance with the NAAQS. Therefore, as discussed in the EPA-Limetree EJ Analysis, EPA is requiring these ambient monitors to assess compliance with the health-based NAAQS in a community highly impacted by multiple complex environmental burdens and to meet EPA's obligation under EO 12898. Thus, public health is at the core of EPA's reason for requiring an ambient monitoring network for three of the criteria pollutants, SO2, NO2, and PM2.5, so that a comparison to the health-based NAAQS may be made. The PAL conditions do not need to prescribe the specific remedy in the event that an ambient monitor detects a violation of the NAAQS because 40 CFR § 52.21(aa)(8)(ii)(b)(3) provides EPA with authority to "reduce the PAL if [it] determines that a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation." There are other options to address a

NAAQS or increment violation, if one occurs, through the State Implementation Plan (SIP) process. For example, it is possible that a limited number of specific units could cause or contribute to a NAAQS violation, and we could address that violation through the SIP without reducing the PAL. The response to a violation would be tailored to the particular situation. Importantly, the permit conditions do contain robust requirements for ambient monitoring of SO2, NO2 and PM2.5 so that we are alerted to a violation and can respond appropriately.

In addition, as discussed in EPA Response to Comment 120, the PAL permit will limit emissions of Volatile Organic Compounds (VOCs) which include some hazardous air pollutants including ones that may cause cancer. The PAL permit contains record keeping and monitoring requirements for each PAL pollutant to ensure annual emissions stay within the PAL limits.

EPA's EJ analysis forms the basis of measures incorporated into the draft PAL permit to address concerns about the uncertainty of the modeling results. That is, Limetree will be required to conduct ambient monitoring, to upload the ambient measurements onto EPA's Air Quality System (AQS) website, which is available on-line to the public, and to report on a quarterly basis the concentrations that are measured. Furthermore, as the EPA-Limetree EJ Analysis states and the draft permit requires, if an exceedance or violation is measured, Limetree must report this to EPA and DPNR no later than 15 days after detection, as discussed in more detail in EPA Response to Comment 119, below.

Comment No. 119
Firstly, the self-reporting mechanism is problematically reminiscent of how, according to Senator Nellie Rivera-O'Reilly, "the U.S. government allowed HOVENSA to 'self-report' its emissions, even though some residents had complained of becoming 'violently ill' from pollution…" Secondly, 15 days just to *report* a violation comprises far too long a time period for this EJ community to live with the health and practical burdens that foreseeably result from breathing unclean air.

Response 119
It is important to distinguish between ambient monitoring, which detects pollutant concentrations in ambient air, and unit-specific emissions monitoring which measures the amount of pollution emitted from each of the many units at the facility. The former is used to assess the air quality impacts at Limetree's areas of maximum impact, and the latter measurements are summed to determine whether the PAL emission levels in the permit are violated. We understand the commenters' concern about potential health impacts (discussed, below, in EPA Response to Comment 120) and ensuring the integrity of monitoring and reporting whether it is ambient monitoring or unit-specific emissions monitoring. The reporting requirements in this permit are at least as stringent as those in other Clean Air Act permits. In fact, the monitoring, reporting and record-keeping provisions of a PAL permit are more robust than most PSD permits because the PAL provisions have very specific monitoring, recordkeeping and reporting requirements. See 40 CFR § 52.21(aa)(12)-(14). Limetree is not reporting to itself. Rather, it is reporting to EPA under explicit legally enforceable conditions in the permit and with EPA oversight.

The conditions for unit-specific emissions monitoring were developed based upon widely accepted and rigorous monitoring approaches that are specified in the underlying regulations. The reporting requirements in the permit are federally enforceable. EPA has discretion to take enforcement action against Limetree if there are violations of the monitoring, recordkeeping, and

reporting requirements in the permit. Limetree must provide EPA with semi-annual reports containing unit-specific information and report deviations or exceedances of the PAL emissions limits to EPA within two working days. These reports are public information which are available from EPA through the Freedom of Information Act. More broadly, Limetree must also submit certified compliance reports to DPNR pursuant to Clean Air Act Title V requirements, report deviations to DPNR, and identify corrective actions or preventive measures, within two days; these reports can be obtained from DPNR.

The PAL permit conditions for ambient monitoring require the permittee to develop an ambient air monitoring plan and QAPP which must be approved by EPA, and no data will be accepted by EPA until the approval is issued. The permittee must also follow the Quality Assured/Quality Control procedures specified in 40 CFR § 58. While it is the permittee's responsibility to collect the data, the permittee must upload the data to EPA's on-line Air Quality System website on a regular basis and formally report them to EPA and DPNR on a quarterly and annual basis. The on-line data is available for review not only by EPA and DPNR but by members of the public.

Further, EPA has authority to conduct audits and inspections of the ambient monitors, the measured ambient data, and of the facility, to ensure that Limetree is operating according to their permit conditions and that the ambient measurements meet data quality requirements in EPA regulations including the proper quality assurance, quality controls, and data capture criteria needed for ensuring compliance with the NAAQS. The 15-day notice requirement for exceedances or violations of the NAAQS is to avoid waiting for notification of a potential issue until the time of the quarterly report. Fifteen days is a relatively short amount of time in the context of the statutory and regulatory requirements to address violations of the NAAQS. Violations of the newer more stringent shorter-term NAAQS for NO2, SO2, and PM2.5 addressed in the PAL permit's ambient monitoring conditions, are determined based on 3 years, rather than days, of data. This is why one exceedance of the NAAQS on a particular day does not necessarily mean that there is a violation of the health-based NAAQS. In fact, three years of data are required to make a finding of violation of the NAAQS which puts into perspective the relatively short fifteen-day maximum notice period.

In order to explain why an exceedance of the NAAQS on a particular day does not, by itself, represent a violation of the health-based NAAQS, it is important to provide some background on the "form" of the NAAQS and how it relates to the concentration level. As described in footnote 6 of the EPA's EJ Analysis, the NAAQS for each pollutant may be found on EPA's website at *https://www.epa.gov/criteria-air-pollutants*. Each NAAQS pollutant includes a concentration level and is expressed in a certain form. The concentration level and form are different for each pollutant and averaging time. The concentration level for each pollutant is developed by EPA based on careful evaluation of epidemiological evidence about health impacts from that pollutant taking into account sensitive populations. An exceedance means one occurrence of either a measured or modeled concentration that exceeds the specified concentration level of such standard for the averaging period specified by the standard (40 CFR § 50.1). A violation of the NAAQS occurs when the form of the standard is violated (40 CFR § 51 Appendix W, section 9.2.2, (*i.e.,* when and where the predicted design concentration is greater than the NAAQS)"). A reason for establishing a NAAQS in the respective form is that it eliminates measurements that could be statistical outliers and allows for a determination of a violation to be made on a more robust estimate.

For example, the concentration level of the 1-hour SO2 NAAQS is 75 ppb (or 196 *u*g/m^3). The form of the 1-hour SO2 NAAQS is the 3-year average of the 99th percentile of the annual distribution of the daily maximum 1-hour concentrations. An exceedance is a 1-hour concentration that is greater than 75 ppb. A violation of the NAAQS would occur if the 3-year average of the 99th percentile of the annual distribution of the daily maximum 1-hour concentration is greater than 75 ppb. Having the continuous monitor that measures both an exceedance and a violation of a NAAQS will assist EPA and VIDPNR in assessing the status of the air quality in the area and better understand the sources of the elevated concentrations.

Comment No. 120
The residents of St Croix will not put the refinery's economic "viability" above their physical health and that of the islands air and water. I do not wish for my health to suffer and do not want the environmental ramifications of allowing more toxic pollutants to be released by the refinery. The air was not as clean, and people got sick that lived close by or lived in the winds where it blew. A local high school is experiencing a strong gas odor. At the time of drafting these comments, students at St. Croix Central High School, located near the Refinery, are missing their second *week* of school due to complaints of a foul smell.

Response 120
The community is impacted by a number of environmental burdens, including the history of odors, as discussed in the EPA-Limetree EJ Analysis. The odors, in part, formed the basis of the decision discussed in Region 2's environmental justice analysis, consistent with EO 12898 and the PAL regulatory provisions, to include ambient monitoring conditions in the PAL permit.

EPA received a number of requests for technical assistance from DPNR related to odors on St. Croix over approximately a ten-year period. EPA responded on at least five occasions. The source of the odors varied during our visits and could not always be definitively identified. While regulation of odors is outside the scope of the PAL permit action, we will continue to support DPNR in these efforts. In drafting the PAL permit, EPA did not put economic viability above the health of the people in the community. The PAL permit provisions do not provide for EPA to consider the economic viability of the facility when issuing a PAL permit. Only specific requirements enumerated in the PAL provisions are considered such as emission limitations, monitoring, recordkeeping and reporting requirements, fugitive emissions, and other air pollution emissions-related considerations. And as discussed in EPA Response to Comment 108, EPA can consider other requirements necessary to implement and enforce the PAL, such as those related to avoiding a health-based NAAQS exceedance or violation. In addition, the Executive Order on Environmental Justice and the Clean Air Act directs EPA to consider the health impacts on the community related to ambient air quality. EPA agrees that the health of the residents of St. Croix is important and thus we incorporated ambient monitoring of 3 health-based criteria pollutants into the draft permit so that air quality concentrations may be measured, with required notification to EPA if adverse concentrations are found so that further action can be taken. EPA does not have authority under the PAL permit regulations to impose requirements for specific hazardous air pollutants because the PAL permit program only addresses emissions of pollutants regulated under 40 CFR § 52.21 and precursors to such pollutants, which does not directly include air toxics. However, in response to the community's concern about adverse health impacts due to various air toxic pollutants, EPA notes that air toxics were part of a study conducted in St. Croix in 2011. The study included ambient measurements of the various air toxics. It was found that the concentrations were within benchmark concentrations for health risk

assessments. Because this study was conducted in 2011, it would have included concentrations from the portion of the refinery that will be operating under the PAL permit. To the degree that the air toxics of concern are Volatile Organic Compounds (VOCs), which are precursors to the criteria pollutant ozone, the PAL permit will serve to limit their emissions, including ones that may cause cancer. Otherwise, the air toxics are outside the scope of the PAL permit program. EPA also understands that people reported illnesses and complained of experiencing odors even after HOVENSA shut down. The range of environmental burdens, including odors, experienced by the community is, in part, the basis of our conclusion in the environmental justice analysis that ambient monitoring including site-specific meteorological monitoring should be implemented. The conditions that we included in the PAL ensure that we can take action, as discussed above in EPA Response to Comments 116 and 118, in the event that Limetree's emissions cause exceedances or violations of the health-based NAAQS. We note that one of the ambient monitors will be located near the hospital which will make it possible to measure air quality for the sensitive populations at the hospital. With respect to the commenters' concern about impacts on water, please see EPA Response to Comment 122 which discusses EPA's acid deposition analysis.

Comment No. 121
EPA should provide an extension of 60 days for the comment period to allow the community more time to review the thousands of pages of documents. We are asking for more time to review the Limetree Bay Refinery Clean Air Act Plantwide Applicability Limit (PAL) permit application, a highly technical project. The use of a PAL will harm the burdened EJ community of South-Central St. Croix by reducing opportunities for public participation.

Response 121
Public participation was a critical factor that weighed into EPA's EJ analysis. The public comment period began on October 9, 2019 and was lengthened from the 30 days as required by regulation, to 47 days.[10] The public notice provided a link to the complete administrative record which was available to the public as of October 9, 2019. Because of EJ concerns, on November 7, 2019, EPA held a public availability session which is not required by regulation. The public availability session included an educational presentation and an informal question and answer session that could assist the public in making informed comments. A public availability session was provided in advance of the public hearing, which was scheduled even before learning whether there was a significant degree of public interest, so that the public could learn more about the draft PAL permit and participate in the permit process. The public was able to submit timely comments until November 25, 2019, which was 18 days after the public availability session. Thus, EPA recognized the importance of public participation opportunities in the permit process, provided more time than required by regulation, and offered opportunities for the public to meaningfully participate in the process and submit comments. Given the ample time provided for commenting on the PAL permit and the accessibility of documents on EPA's website from October 9, 2019 until the close of the public comment period on November 25, 2019, EPA decided not to extend the public comment period as requested in the comment.

If the commenter, in its reference to reduced opportunities for public participation, is also alluding to future additions or emission changes at the facility that are allowed by the PAL, such changes are allowed under the PAL provisions and may or may not require a minor NSR permit

[10] Note that while the October 9, 2019 Public Notice announced a 45-day public comment period, EPA added two additional days, for a total of 47 days, because the 45th day fell on a Saturday.

to be issued by the USVI; if a minor NSR permit is required, there would be an associated public comment period. This is a fundamental characteristic of a PAL that was established when EPA wrote its PAL provisions, so EPA Region 2 does not have the discretion to change this in the context of this PAL permit approval. However, the PAL issued in this action requires that emissions stay within the annual emission cap for each pollutant in the PAL permit. Any requested increases or changes greater than the PAL limits would need to undergo another round of permit review in accordance with 40 CFR § 52.21(aa)(11). It is also worth noting that any such increase in the PAL would again be required to meet the public participation requirements in 40 CFR § 124 and would follow environmental justice EO 12898, which also includes a public participation component. Further, 40 CFR § 52.21(aa)(8)(ii)(c) provides that "[e]xcept for the permit reopening in paragraph (aa)(8)(ii)(a)(1) of this section for the correction of typographical/calculation errors that do not increase the PAL level, all other re-openings shall be carried out in accordance with the public participation requirements of paragraph (aa)(5) of this section." Therefore, public participation will be solicited in the future for increases and reopening of the PAL permit, and such participation will be consistent with 40 CFR § 124, the EJ executive order and the PAL provisions.

Comment No. 122

EPA must perform a BiOp and consult with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service on all endangered species surrounding the refinery to comply with the Endangered Species Act (ESA). Consultation with National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (FWS) is triggered under Section 7 of the ESA by undertaking an agency action such as permitting. The Draft Permit is a federal action that will impact 23 federally-listed threatened and endangered species in the footprint of the Refinery, and accordingly, EPA must consult with the FWS and the NMFS to ensure that the polluting activities contemplated by the Draft Permit will not jeopardize the continued existence of these imperiled species to comply with the ESA. VOCs can impact air-breathing mammals, particularly cetaceans. One study of the chemical composition of Grey Whales' exhales matched a database of VOCs found in humans. The facility will emit significant amounts of greenhouse gases, including carbon dioxide, which is the primary driver of global warming and ocean acidification. Coral species are extremely vulnerable to the impacts of ocean acidification and noncalcareous marine flora and fauna also suffer effects, albeit less obvious effects of ocean acidification, such as neurological changes that alter behavior. NOx contributes to acidification of the ocean Birds are more exposed to PM than humans because they have a higher breathing rate and spend more time in the open air. The Least Tern and Roseate Tern are particularly vulnerable to the impacts of air pollution, particularly from NOx and PM. The primary hypothesis for the effects of soil acidification on terrestrial birds is that acid deposition can reduce the abundance of ground-dwelling invertebrates that some birds require for adequate calcium supply which can adversely affect egg laying, eggshell integrity, and growth of hatchling birds and neonatal mammals.

The Draft Permit contemplates polluting activities with potential to harm to Sandy Point National Wildlife Refuge, a local resource important to St. Croix's tourism economy, which is located about 10 miles west of the Refinery and designated as critical habitat for nesting endangered Leatherback Sea Turtles under the ESA. Sandy Point is also a vital nesting habitat for critically endangered hawksbill sea turtles and threatened green sea turtles.

Response 122
Section 7(a)(2) of the ESA requires federal agencies to ensure, in consultation with the FWS and/or NMFS (the Services), that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any federally-listed threatened or endangered species or destroy or adversely modify the designated critical habitat of such species. Under applicable implementing regulations promulgated by the Services, consultation is required for actions that "may affect" listed species or designated critical habitat. 50 CFR § 402.14(a). The regulations also provide an optional informal consultation process during which the federal agency may determine, with the written concurrence of the relevant Service(s), that the action is not likely to adversely affect listed species or critical habitat. 50 CFR § 402.13(c). If the agency makes such a determination and the Service(s) concur, the consultation process is terminated, and no further action is necessary. Id.

In connection with the PAL permit, EPA conducted informal consultation with both FWS and NMFS. During the informal consultation process, EPA prepared and provided the Services with an evaluation of potential impacts of the permitting decision on listed species and critical habitat in the action area, responded to inquiries and requests for additional information from the Services, and determined that issuance of the permit would have no likely adverse effects on listed species or designated critical habitat. The Services concurred in writing with EPA's determination. EPA received FWS concurrence on Feb. 28, 2020 and NMFS concurrence on Sept. 4, and 9, 2020. Under 50 CFR § 402.13(c), the consultation process has been properly terminated and EPA has fulfilled its requirements under the ESA. Documentation memorializing EPA's evaluation and determination and the Services' concurrence is included in the record for this permitting action and is incorporated by reference as part of this response.

The Least tern and the Roseate tern, referenced by the commenter as being particularly vulnerable to NOx and PM, are not included on the FWS or NMFS species list for the project and surrounding impact area. FWS has listed the Least tern as endangered for various midwestern and southeastern states in the continental US. Even though this species overwinters in the Caribbean and South America, it is not listed as endangered in the USVI. FWS has listed the Roseate tern as threatened in the USVI but the IPaC tool used for identifying FWS species, does not list this species in the vicinity of the project and impact area.

In addition, the commenter stated that VOCs can impact air-breathing mammals, particularly cetaceans, and mentions the Grey Whale in particular. While the Grey Whale is not one of the listed species in the action area, EPA's ESA analysis did include air-breathing mammals and cetaceans that are listed species, and EPA concluded, with concurrence from the Services, that they are not likely to be adversely affected.

Comment No. 123
The polystyrene floats are all over on the south shore beaches, especially Cane Garden Bay Beach. Due to Limetree's contractors and Tropical Storm Karen, on September 24, 2019 polystyrene broke loose from the installation of the Limetree pipeline. As of November 18, 2019, pieces of polystyrene, some as small as bits of rice, were still seen washing up on St. Croix's beaches. This highlights the risk to St. Croix's wildlife, including and especially the 23 ESA-listed species. We are concerned about the potential impacts to wildlife from discharge of other dangerous materials, particularly during inclement weather. Hurricanes have caused oil spills which can be catastrophic for wildlife. The risk of such events is only going to increase with the

reality of a changing climate, dramatically so in the US Virgin Islands. Oil spill response is often extremely ineffective. There will also be increased risk of ship strikes caused by increased vessel traffic that will necessarily accompany the refinery restart. Our corals are already bleached, and our marine life is suffering. There should not be polluting industries near the national parks in the U.S. Virgin Islands.

Response 123
The PAL permit is neither a construction permit nor an authorization to resume operation at the refinery. Limetree could start operating at any time without the PAL permit and is not required to obtain the permit. Rather, Limetree requested a PAL to create a restriction on its operation so as to afford it operational flexibility without triggering new PSD preconstruction permitting requirements. The annual limits taken by Limetree in the PAL permit are lower than the allowable emissions in the existing PSD permit. Issuance of the PAL permit will not increase, cause, or affect potential issues for wildlife relating to polystyrene accidents, oil spills, or ship strikes or otherwise negatively affect the national parks in the USVI. These issues relate to operations at the facility unrelated to the PAL permit. As noted above, the facility can proceed to operate without any need for the PAL permit. The comment includes a general reference to ESA-listed species. As described in response to Comment 122 above, EPA has complied with applicable ESA requirements by conducting informal consultation with the Services and obtaining their written concurrence on EPA's determination that issuance of the PAL permit will have no likely adverse effects on listed species or designated critical habitat. We also note that Limetree has a Risk Management Plan/Integrated Contingency Plan to address these types of concerns including impacts such as from polystyrene floats that come from Limetree's vessels on the south shorelines of St. Croix including Cane Garden Beach. See EPA Response to Comment 125 below.

The commenter references coral bleaching but does not indicate how the PAL permit would have implications for bleaching-related impacts. Rather, the reference appears to reflect a general concern about the health of the coral species. EPA is fully committed to the protection of coral reefs surrounding St. Croix and established a Caribbean Coral Reef Protection Plan in 2014, updated in December 2019, to address the protection of coral reefs in the Caribbean including the U.S. Virgin Islands. Region 2 developed this Plan to implement "direct" actions to address threats to coral reef ecosystems in the USVI and has taken a strong role in protecting coral reefs through research, grant funding, technical assistance, and program development, implementation and enforcement, and will continue to do so. The main objective of the plan, which recognizes the potential impacts of plastics, addresses threats to the coral reef ecosystem. Furthermore, EPA has focused its efforts both nationally and regionally on addressing the threats to coral reefs from land-based sources of pollution.

Comment No. 124
Absolutely no Flouride-based fire foam for oil fire extinguishing should ever be used on St. Croix - it is a known carcinogen and akin to PCBs - they must be fluorine free.

Response 124
Flouride-based compounds such as per- and polyfluoroalkyl substances (PFAS), which include PFOA, PFOS, GenX, and many other chemicals, have been manufactured and used in a variety of industries including fire-fighting foams. Certain PFAS chemicals are no longer manufactured in the United States as a result of phase outs including the PFOA Stewardship Program in which

eight major chemical manufacturers worked with EPA to eliminate the use of PFOA in their products. But products containing these chemicals are still manufactured internationally and possibly in smaller companies in the US. EPA has taken a range of regulatory actions to address PFAS substances in manufacturing and consumer products, but there is no specific action or legal authority under the Clean Air Act's Prevention of Significant Deterioration PAL program whereby EPA can prevent the use of these chemicals for fire foam.

Comment No. 125
Commenters are concerned about the inadequacy of comprehensive emergency preparedness plans – especially ones that acknowledge climate change and category 5 hurricanes. Furthermore, sea level rise makes this and all coastal refineries susceptible to flooding, for which this refinery is unprepared to address. The federal government must stop refuting the scientific evidence of climate change and forgetting about environmental protection while trying to protect the profits of polluters. We must transition as fast as possible from fossil fuels if future generations are going to have any chance of a habitable planet. The oil refinery in St. Croix is a threat to the environment and will exacerbate the climate crisis by releasing millions of pounds of carbon dioxide. We must not backslide in efforts to transition to a more just, sustainable, job-producing green economy. We shouldn't be reviving and investing in last century's crude oil refineries and giving big polluters a free pass; we should be dismantling them and shutting down fossil fuel projects. We should be acting as better stewards of the plant and move forward using readily available green, clean technology, such as wind or solar at or around this site on our tourism-based island paradise. Please deny this facility's permit.

Response 125
Given the recent history of hurricanes and their devastating impacts on the USVI, we understand the commenter's concern. And we recognize the potential for impacts to the surrounding area that could result in the event of significant damage to the Limetree facility in the event of an accident or as the result of a severe storm. While the PAL provisions at 40 CFR § 52.21(aa) do not include provisions for comprehensive emergency preparedness plans, the facility has a Risk Management Plan (RMP) registered with the Agency, pursuant to the requirements of Section 112(r)(7) of the Clean Air Act and the implementing regulations at 40 CFR § 68. The RMP-covered processes identified in the most recent RMP submission requires compliance with emergency response requirements, acknowledges the vulnerability from hurricanes, and indicates that Limetree maintains a separate hurricane preparedness plan which is reviewed and updated annually prior to the June 1 start of hurricane season. We are not aware of reference to climate change in these documents, but they would address emergencies regardless of the cause. See also EPA Response to Comment 123 with respect to oil spills and the Endangered Species Act. We recognize the commenter's concern about shifting away from fossil fuels and towards a green economy EPA notes that, as discussed in EPA Response to Comment 123, the PAL permit is neither a construction permit nor an authorization to resume operation at the refinery and the PAL provisions of 40 CFR § 52.21 do not contain language related to weighing energy or economic policy in the PAL permit process.

Comment No. 126
Children are disproportionately exposed to the emissions and resulting health effects from refineries. Additionally, people of color, including African Americans and Hispanics have a higher cancer risk from toxic air emissions from refineries than the average national population, as do adults living below the poverty level.

Response 126
Consistent with President Clinton's April 21, 1997 Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks, EPA considers it a "high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children." EPA ensures that human health is protected by reviewing and revising applicable NAAQS, and the Agency has recently adopted stricter NAAQS for several pollutants. As discussed in EPA Response to Comment 118, EPA develops the NAAQS in consultation with the CASAC, that are protective of the sensitive populations, including children. The ambient monitoring provisions in the PAL permit are designed to assess whether the protective health-based NAAQS are being met.

EPA acted consistently with Executive Order 13045 since receiving Limetree's permit application by ensuring that an ambient air quality modeling analysis was performed and by including the ambient monitoring conditions in the PAL permit. Further, as discussed in EPA Response to Comments 116 and 118, EPA invoked its authorities under Sections 114 and 165 of the Clean Air Act and Section 40 CFR § 52.21(aa)(8)(ii)(b)(3) and 40 CFR § 52.21(aa)(7)(x) of the PAL provision, and applied EJ EO 12898 in this case due to the large minority and low income population surrounding this facility. The ambient monitoring requirements are included in the PAL permit to further the protection of this population as well as children and other sensitive groups. See also EPA Responses to Comments 120 and 128 with respect to the concern about toxic air emissions.

Comment No. 127
Commenters petitioned the Governor, members of the 29th Legislature, the Delegate to Congress, and the U.S. Department of the Interior where they requested "immediate testing and evaluation of air quality". In addition, the comments petitioned that they would like to have medical treatment and equipment such as gas masks and HAZMET training.

Response 127
EPA cannot respond on behalf of the Governor, members of the 29th Legislature, the Delegate to Congress, or the U.S. Department of the Interior. However, with regard to evaluation of air quality, the PAL permit requires ambient air quality monitoring to ensure that EPA and DPNR can take appropriate action if an exceedance or violation is measured. See Responses to Comments 118, 120 and 126; see also EPA Response to Comment 125 on emergency planning.

Comment No. 128
The Virgin Islands community and infrastructure cannot survive any major catastrophe or accident and there are no medical facilities presently available to handle emergencies. Need tracking and reporting of incidence and types of cancer on St. Croix. Should know how disease in STT compares with STX.

Response 128
The facility will need to comply with the local ordinances regarding infrastructure and emergency plans. The commenter appears to be asking EPA to track the incidence and types of cancer on St. Croix and compare the data with the incidence on St. Thomas. Tracking of cancer in any location falls under different government entities and is not within EPA's authorities under 40 CFR § 52.21. While EPA has not made any comparisons specific to disease, we did compare environment burdens in South St. Croix to other parts of St. Croix and the USVI and

determined that, based on a number of factors discussed in the Sept. 19, 2019 Environmental Justice Analysis, the area near Limetree was disproportionately burdened. In addition, as noted above, air toxics were part of a study conducted in St. Croix in 2011. The study included ambient measurements of the various air toxics. It was found that the concentrations were within benchmark concentrations for health risk assessments. While emergency management is not included in the PAL provisions of 40 CFR § 52.21, we are aware that there is a hospital in St. Croix to the north of the facility although we have not studied its capacity because consideration of emergency facilities is outside the scope of our permit process. See also EPA Response to Comment 125 on emergency planning.

Comment No. 129

The baseline emissions calculation is fatally flawed because it is based on unreliable data from an inappropriately high-output time period immediately preceding Hovensa being fined under the CAA.

The Draft Permit's PAL calculations are inappropriately high and could allow for deleterious levels of pollution because the actual emissions (BAE) are extrapolated from extremely limited and extrapolated data, predicated upon a time period of high Refinery output that does not represent the stated plans of Limetree[38], and are taken from the time period immediately preceding Hovensa's due to violations of the CAA.[39] Accordingly, EPA should reject the Draft Permit both for its inappropriate proposition of a PAL and unsuitable calculations pursuant thereto.

The relevant regulations define BAE as "the rate of emissions, in tons per year, of a regulated NSR pollutant" and further defines this as "the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive 24- month period selected by the owner or operator within the 10-year period immediately preceding . . . the date a complete permit application is received by the Administrator[.]"[40] The regulations further state that this average rate "shall be adjusted downward to exclude any non-compliant emissions . . . [and] that would have exceeded an emission limitation with which the major stationary source must currently comply."[41] Limetree selected the 24-month baseline period from January 2009 – December 2010 for determining the BAE for each of the proposed PAL pollutants.[42]

These PAL calculations are fundamentally and fatally flawed because they are predicated on BAE data that EPA Region 2 acknowledges is "limited." This seems to be an understatement given the myriad ways in which this data is limited. Specifically, EPA Region 2 states in the EPA-Limetree EJ Analysis: "[Limetree] had limited archived CEM data, from only two out of seven turbines, which measured mass emission levels, and some fuel use data. They also had up to 2 years of hourly heat input rates but only from a few heaters, boilers, and turbines out of approximately 80 such units in the PAL application."43 The EJ Analysis then continues to note that because the facility has ceased operating for about seven years, this could lead to "differences in emissions and heat input upon startup," and — alarmingly — concedes that "Limetree might very well operate in a different manner than Hovensa . . . [t]herefore, some uncertainty exists in relying on the data."44 Problematic extrapolation is then noted in the EPA-Limetree EJ Analysis, whereby "since the information was not available for all units, the units that had the available information were assumed to be representative of the other heaters, boilers, and turbines. This assumption leads to additional uncertainty."45 This uncertainty is problematic in the context of the outsize capacity of Limetree compared to other facilities with PAL permits

and the resultant range of scenarios: "considering the vast number of units at Limetree's refinery and terminal operations compared with other PALs that have been issued, there are many more possible operating scenarios than we have seen in the past[.]"46 This uncertainty is especially problematic given the failure of EPA and Limetree to include the modeling files (with ability to examine and manipulate the data) in the Administrative Record.

In addition to the data being uncertain, the BAE calculation is inappropriate because it sets emissions limits for a project that Limetree claims will be lower-output than Hovensa based on the emissions from an extremely high-output time for Hovensa. As the Permit Application notes, in 2010 (within the BAE time period) Hovensa's processing rate was 525,000 barrels per calendar day.47 In contrast, Limetree represents that it intends to process 200,000 barrels per day.48 We acknowledge that the PAL regime was created to allow facility operators "flexibility . . . to respond rapidly to market changes."49 However, by contemplating more than double the intended output and relying on patently uncertain data therefor, this "baseline" is clearly neither representative of, nor appropriate for, the intended polluting activities. If it is Limetree's intention to ramp up its production to Hovensa-era levels, this must be explicitly disclosed to the community.

Additionally, the BAE calculation is inappropriate because the baseline period, 2009 – 2010 represents the 24-month period prior to Hovensa being fined millions of dollars for Clean Air Act violations.50 The Permit Application states that the BAE calculation is adjusted downward to account for "non-compliant emissions during the baseline period and emissions in excess of newly applicable limits."51 Given the overt unreliability and incompleteness of the calculation data, historic issues with Hovensa's self-reporting of violations (discussed below), and the aforementioned inflated baseline, this adjustment fails to provide adequate assurance that Limetree's activities pursuant to the PAL will not effectuate exceedances of the NAAQS.

Accordingly, for the reasons stated above, we implore EPA to reject this Draft Permit as the BAE, which should properly be set to zero and evaluated by source of pollution, has fundamental and fatal flaws in its calculation. We note that these issues of extrapolation and inflation would be significantly less present if the Refinery were to be properly evaluated as a "new" source for PSD purposes and the emissions limits set by source, rather than by facility. Additionally, we note the failure to include the adjustable modeling files in the Administrative Record and request that EPA Region 2 make these publicly available.

Response 129

The commenter correctly states that the relevant regulations define BAE as "the rate of emissions, in tons per year, of a regulated NSR pollutant" and further define this as "the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive 24- month period selected by the owner or operator within the 10-year period immediately preceding…the date a complete permit application is received by the Administrator." 40 CFR § 52.21(b)(48)(ii). The regulations further state that this average rate "shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above an emission limitation that was legally enforceable during the consecutive 24-month period [and]…any emissions that would have exceeded an emision limitation with which the major stationary source must currently comply, had such major stationary source been required to comply with such limitations during the consecutive 24-month period." 40 CFR § 52.21(b)(48)(ii)(b)&(c).

In its BAE calculations, the applicant did address past violations and reductions required by the Consent Decree by deducting those emissions or by omitting such emission units from the BAE estimates. Appendix C and Section 4 of the PAL application describe where and how these adjustments were made. EPA subsequently lowered the PALs due to factors including requirements in the Consent Decree to address historic noncompliance and an error in the NOx emission factor for certain emissions units. *Letter from John Filippelli, EPA Region 2, to Darius Sweet and Brian Lever, Limetree, Aug. 14, 2019*. In particular, EPA adjusted the PALs proposed by Limetree to reflect emission reductions from six combustion units that were permanently shut down after the baseline period to meet Consent Decree requirements. EPA also adjusted the baseline for NOx for eleven combustion units, by recalculating with the correct NOx emission factor. Note that in response to a comment from Limetree, received during the public comment period, EPA has raised the PAL level for NOx in the final permit. See EPA Response to Comment 16.

Limetree selected the 24-month baseline period from January 2009 – December 2010 for determining the BAE for each of the proposed PAL pollutants. EPA's understanding is that Limetree chose this 24-month period for its baseline emissions because HOVENSA began shutting down portions of the refinery in 2011 and, as a result, 2009/2010 represents the most recent period of full operation of the facility when it processed, on average, 525,000 barrels per day of crude oil. In subsequent years, especially since 2012, the refinery ceased operations. During the years prior to 2009-2010, HOVENSA processed more than 525,000 barrels per day but Limetree was unable to use those years as the baseline years because they are outside of the 10-year period for selecting the 24-month baseline. Further, future refinery operation at a crude oil processing rate of 200,000 barrels per day is not relevant to the calculation of the BAE or setting the level of PALs in this PAL permit.

The BAE are determined using the best available data and represent annual average emissions. EPA considers BAE estimates based on annual throughput, annual fuel consumption, annual hours of equipment operation, AP-42 emission factors, past stack tests, other direct emissions monitoring data as reflected in the calculations to be reasonable and acceptable. 40 CFR § 52.21(b)(48)(ii)(e) states that "the average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining *annual* emissions, in tons per year, and for adjusting this amount if required by paragraphs (b)(48)(ii)(*b*) and (*c*) of this section." (emphasis added). While EPA's environmental justice analysis reflects uncertainties with respect to the short-term data necessary to perform an air quality modeling analysis to understand air quality impacts, EPA had adequate information, provided in the administrative record, to establish the BAE using HOVENSA's *annual* emissions estimates during the 2009/2010 baseline period. This information was available in the administrative record for the draft permit. It is important to distinguish between the data required to calculate BAE and the data required for the modeling analysis. It is not unusual to have gaps in unit-specific monitoring data when determining a baseline and, therefore, it is common to use other methods to calculate annual emissions such as emission factors, data from similar units, and the other methods discussed above. However, short-term data were necessary for Limetree's ambient modeling analysis because we were comparing the results of the analysis to the short-term NAAQS for NO2, SO2 and PM2.5. HOVENSA's short-term emission data was limited, and the method used by Limetree to estimate a short-term emission rate contained uncertainties as discussed in EPA Response to Comment 106.

As to the concern regarding baseline emissions and the claim that EPA did not provide "adjustable modeling files" in the administrative record for the public to "examine and manipulate the data," EPA did include a DVD of the AERMOD modeling files in the physical administrative record which could have been run and adjusted by anyone who requested a DVD diskette from EPA or visited the EPA Region 2 New York office. EPA did not include these modeling files on the PAL permit website or the electronic docket. 40 CFR § 124 does not require EPA to post online all documents or data in the record. *See, e.g., In Re: Energy Answers Arecibo, LLC*, 16 E.A.D. 294, 2014 WL 1260977, at *38 (EAB 2014); *see also In Re: City of Taunton, Department of Public Works*, 17 E.A.D. 105, 2016 WL 3352212, at *17 n.19 (EAB 2016). EPA notes that modeling files, and the accompanying data set, are extremely large files and therefore we typically do not post these files online, but access to the files, like all supporting documentation that form a basis for the Draft Permit, are available upon request by contacting EPA or by visiting the Region 2 New York office.[11] Indeed, a representative of the commenter visited the New York office during the comment period and was given access to the full administrative record which included the AERMOD DVD that contains the full modeling data and output files. We also note that Limetree's Environmental Justice Modeling Report, which was included in the electronic docket for the draft permit, contains a description of the data used, the model used, assumptions, years of meteorological data, pre-and post- processors, and other modeling details.

Moreover, other than the comment itself, which was received on the last day of the public comment period, EPA does not have any record of communication from any commenter seeking access to the modeling data, nor would EPA have denied any such request if received in time for EPA to make arrangements for viewing the files and data. *See In Re: Energy Answers Arecibo, LLC*, 2014 WL 1260977, at *38. Finally, even assuming, *arguendo*, EPA should have posted the modeling files to the PAL Permit website or docket during the notice and comment period, EPA did not rely on the modeling data for the baseline emissions calculations because, as noted above, EPA determined the emission rate estimates via the facility's annual emissions. Because EPA did not rely on the modeling files for determining the baseline emissions or PAL levels in the draft permit decision, the commenter is not prejudiced by EPA's failure to post the modeling files on the Draft Permit's public notice website. *See id.* at *39 (holding that "no harm or prejudice occurred" because, despite some documents not being available online, "the most significant documents forming the basis of the Draft Permit were available online." (citing *In re ConocoPhillips Co.*, 13 E.A.D. 768, 779 n.12 (EAB 2008)).

The commenter raises concern about statements in EPA's EJ Analysis that, after the facility had ceased operating in 2012, the facility's emissions, heat input and operation upon startup could be different than when HOVENSA operated the facility. EPA's statements relate to the modeling analysis rather than the question of the appropriate BAE. In setting the level of the PALs, EPA followed the procedures specified at 40 CFR § 52.21(aa)(6). The PAL provisions are intended to provide flexibility to facilities in their operations as long as they comply with the PAL. Facilities

[11] And in response to this comment, Region 2 explored new approaches to making available extremely large files that cannot be posted on our website. We recently learned that the Agency has the ability to upload the modeling files to an FTP site for easier access and included a link to the files in the docket for public review. These modeling files include the AERMOD dispersion modeling files for the Environmental Justice analysis conducted by Limetree, dated June 2019, and the CMAQ photochemical modeling files for the deposition analysis conducted by EPA for the ESA consultation with NMFS, dated August 11, 2020 (the CMAQ files are too large for a DVD diskette). Detailed information to access the modeling files can be found in .pdf format in the final permit's docket.

are not expected or required to operate in the manner in which they operated during the baseline period.

Comment No. 130
Limetree must include continuous fenceline monitoring and make all emissions data available to the public online and in written reports in both English and Spanish. The requirement for the use of LIDAR for emissions tracking at the Limetree Bay Refinery.

Response 130
Our understanding of the comment is that the commenter would like EPA to require continuous fenceline monitoring and LIDAR requirements for emissions tracking in the PAL permit. The PAL Permit is issued pursuant to 40 CFR § 52.21(aa). There are no requirements in 40 CFR § 52.21(aa) for a source seeking a PAL permit to conduct any fenceline monitoring or any emissions tracking using LIDAR. There are no other EPA regulations that would require a refinery to conduct fenceline monitoring for the criteria pollutants, such as NO2, SO2, CO or Particulate Matter that are the subject of the PAL permit. However, it should be noted that EPA conducted a Risk and Technology review (RTR) of the refinery operations pursuant to Section 112 of the Clean Air Act and finalized its rules in 2015. Among other requirements, the RTR rule established a benzene fenceline monitoring work practice standard with an initial compliance date of Jan. 30, 2018, for existing sources. The fenceline monitoring provisions were incorporated into Title 40 of the Code of Federal Regulations (CFR) § 63, Subpart CC (the Refinery MACT 1 standard) and EPA Reference Methods 325A and 325B. Limetree must comply with these requirements, independent of the PAL permit.

EPA notes that, as discussed in its Response to Comment 106, the facility's existing PSD permit requires Limetree to operate the five ambient monitors (EPA incorporates by reference its previous discussion of ambient monitoring). The ambient monitoring requirement in this PAL permit is based on information that demonstrated reasons for significant concern regarding the new 1-hour SO2 NAAQS. And as also discussed in EPA's Response to Comment 106, EPA agreed to allow the shutdown of the ambient monitors after HOVENSA ceased operation with the understanding that the monitors would be restarted if the facility restarted operations. In addition, Section 165 of the Clean Air Act and Section 40 CFR § 52.21(aa)(8)(ii)(b)(3) and 40 CFR § 52.21(aa)(7)(x) of the PAL provisions provide EPA with specific authority to require ambient monitoring. So, while 40 CFR § 52.21(aa) does not require *fenceline* monitoring, EPA notes that *ambient* monitoring will guard the health of local populations that the commenter seems to be requesting of EPA here.

Comment No. 131
While I know Limetree has some equipment and preparedness plans for an oil spill, I am concerned that, much like ship groundings in the USVI, there will be little recourse for damages. Some have suggested a bond or trust fund for clean-up and I believe this should be expected of a facility touted to be so economically viable by so many….What is the emergency protocol for oil spill? It should be offered for public comment.

Response 131
The issue of oil spill protocols and damages is beyond the scope of this permit because there are no requirements in 40 CFR § 52.21(aa) for a source seeking a PAL permit to address any issues related to a potential oil spill nor does EPA have authority under the PAL provisions to impose a

bond or trust fund. However, EPA's Oil Spill Program under the Office of Emergency and Remedial Response plays an important role in protecting the environment through prevention of, preparation for, and response to oil spills. The commenter is advised to contact the U.S. Environmental Protection Agency Oil Program Center, 401 M Street, SW Mail Code 5203G, Washington, DC 20460 or *http://www.epa.gov/oilspill*. The commenter may also contact - Region 2 Citizen Hotline/Help Desk at (877) 251-4575 for further information. While unrelated to the PAL permit, we also note the following from the 2/12/19 Biological Opinion for Limetree's Single Point Mooring project, which addressed oil spill response:

To comply with the USCG Response Plans for Oil Facilities requirements under 33 CFR Part 154, and in accordance with the facility's Integrated Contingency Plan dated July 2017, the Limetree facility has two oil spill response organizations on site. National Response Corporation (NRC) and Marine Spill Response Corporation (MSRC) currently have over 45,000 feet of containment boom available on site, multiple recovery vessels, and two recovery barges. https://www.eenews.net/assets/2019/10/22/document_pm_03.pdf, at p. 22. See also EPA Response to Comment 125 on emergency planning.

Comments from Citizens/Environmental Groups – Reactivation

Comment No. 132

The refinery must be treated as a new source under PSD rules because the refinery owners have not demonstrated a continuous intent to reopen the refinery since it was shut down in 2012. The April 5, 2018 letter from former Assistant Administrator Wehrum to Limetree regarding EPA's reactivation policy does not reflect EPA precedent and we respectfully urge EPA to revoke or, at the very least, disregard this letter. We urge EPA to reject the draft permit which is fundamentally and fatally flawed because it should properly be evaluated as a "new" stationary source under EPA's well-established reactivation policy. The policy is predicated on the notion that owners and operators of shutdown facilities must continuously demonstrate concrete plans to restart the facility sometime in the reasonably foreseeable future and shutdowns of more than two years are presumed to be permanent and are thus subject to all PSD requirements when reactivated. It is then up to the facility operator to rebut the presumption. Based on the amount of time that the facility has been shut down, the reason for the shutdown, statements of the owner or operator, the cost and time to reactivate, the status of permits, and the ongoing maintenance and inspections at the facility, the refinery can only reasonably be found to be a new source for purposes of PSD review. Accordingly, the draft permit, which is inappropriately predicated and calculated on a presumption that the refinery is an existing source, must be rejected. In addition, in light of former Assistant Administrator Wehrum's resignation from EPA amid ethics and misconduct investigations by EPA's Inspector General and the Energy and Commerce Committee, and recent reports that Limetree is being considered a "customer" within EPA, we respectfully urge EPA to reject the draft permit due to its improper predication on the April 5, 2018 Wehrum letter.

Response 132

This comment does not demonstrate that EPA must deny Limetree Bay's PAL permit application. The commenters have not supported their arguments with any references to the permitting regulation at 40 C.F.R. 52.21 that govern this PAL permit application. The regulations do not require that EPA apply the Reactivation Policy in this or any other context under section 52.21 of the regulation, and EPA maintains its earlier view that Limetree Bay has demonstrated under the framework of that policy that the owners of this facility had a continuous intent to restart the refinery operations.

Prior to submitting this PAL permit application, Limetree Bay sought EPA's views on whether resuming certain refinery operations should be treated as constructing a new source under the Reactivation Policy. EPA responded in April 2018 with the letter from Assistant Administrator Wehrum that is cited and questioned by the commenter (the Limetree Bay Letter). As described in that letter, EPA had been provided with information that the Agency considered sufficient to show a continuing intent to restart the facility, and the comment has not provided additional information that changes EPA's view on that matter.

Shortly after receiving EPA's response, Limetree Bay submitted an application to the Virgin

Islands Department of Planning and Natural Resources (VIDPNR) for an Authority to Construct (ATC) permit to authorize certain changes to the facility that were necessary to implement what Limetree Bay has called the "MARPOL project," through which the company seeks to produce fuel compliant with the maritime sulfur regulations that took effect in January 2020. In this April 13, 2018 application, Limetree Bay stated that it "plans to resume operation of certain refinery process units and certain utilities ('MARPOL Project') that are already permitted to operate under Permit No. STX-TV-003-10 and were described in the Title V permit application." On June 18, 2018, the VIDPNR completed work on this ATC permit application and issued the requested permit. The VIDPNR did not dispute the company's representations that it was resuming operation of emissions units that were already permitted to operate, and it did not receive any comments from members of the public arguing that the company was building a new major source and should be required to obtain a PSD permit. The VIDPNR issued the ATC pursuant to its approved minor NSR program, and it could not have done so if it had determined that the source had been permanently shut down and was required to obtain a major source PSD permit to resume operations if applying EPA's Reactivation Policy. No party filed an appeal or otherwise contested the VIPNR permit decision. EPA also understands that Limetree Bay has been working on the construction authorized under this VIDPNR permit.

Thus, the state of affairs before EPA in this PAL permitting action is that the actions described in Limetree Bay's submissions to EPA and the VIDPNR have thus far been understood to involve resuming operation of an existing major stationary source. In this context, Limetree Bay has applied to EPA for a permit to establish plantwide applicability limits under section 52.21(aa) of EPA's regulations. The purpose of this permitting action is to consider Limetree's application to set plantwide applicability limits such that Limetree Bay has flexibility to make certain changes to the facility, within the established limits, without being required to determine whether those changes are subject to PSD.

In evaluating the baseline emission rate for an existing major stationary source to set the plantwide applicability limits, there is no adjustment to the baseline emission rate for permitting actions that should have, but did not, take place. For instance, the baseline emission rate may be adjusted to account for non-compliance emissions during the baseline period. 40 C.F.R. § 52.21(b)(48)(ii)(b). The commenters are not, as part of this comment, arguing that there were non-compliant emissions during the baseline period. The baseline emission rate may also be adjusted to exclude any emissions "that would have exceeded an emission limitation with which the major stationary source must currently comply." 40 C.F.R. 52.21(b)(48)(ii)(c). Limetree did not apply for a PSD permit to establish new BACT limits before resuming the operations of the refinery. The facility applied for a PAL, and EPA is acting on the application before it. The baseline for the PAL was calculated based on actual emissions in 2009 and 2010 that were allowed under existing PSD permits and other requirements. The commenters do not point to any other authority within the PAL regulations to adjust the baseline emission rate.

Rather, the commenters argue that EPA should deny the application for the PAL permit and apparently force Limetree Bay to instead submit an application for a PSD permit. Comment at 3. But the comments do not demonstrate that EPA is required to apply the Reactivation Policy here or that EPA erred in its 2018 response to Limetree Bay's request under the framework of the policy. The EPA made clear that its 2018 letter was based on the

information LBT had provided to EPA and that EPA was not providing any final determination on the applicability of the PSD regulations to the projects under consideration. EPA also informed LBT that "[a] final determination on PSD applicability will be made on the basis of the information provided in your application and supporting materials." 2018 Letter at 8. Limetree did not submit an application to EPA related to PSD applicability but did submit an ATC permit application and supporting material to the Virgin Islands, which made a determination regarding that application. At this juncture, the commenters are essentially asserting that both EPA's 2018 letter and this VIDPNRs decision to complete action on the minor NSR permit application were improper. EPA disagrees.

On its face, the Reactivation Policy is just that: a policy. It is not binding, and, if circumstances warrant, it need not be followed. In his 2018 letter to Limetree, Assistant Administrator Wehrum noted that EPA intended to reconsider the Reactivation Policy. Based on EPA's review since that time, the Agency has determined it is not appropriate to continue applying the Reactivation Policy because the policy was not well-grounded in the NSR regulations, and it is not supported by the current NSR regulations. In addition, the Reactivation Policy is difficult to follow and can produce inconsistent results based on subjective judgments about how to weigh the various factors against each other. EPA believes it would be better to apply an approach that is more consistent with the text of the existing regulations, provides more certainty, and is simpler for permitting agencies and permittees to understand and follow, as discussed in more detail below. Since EPA has concluded that the Reactivation Policy is no longer an appropriate policy in the context of the existing NSR regulations, the Agency is not applying it in this permitting action.

As part of the 2018 Limetree Bay Letter, the Assistant Administrator for the Office of Air and Radiation noted that the EPA has previously "not cited any specific regulatory provisions of the NSR program to support its position on source 'reactivation.'" Limetree Bay Letter at 2 n.2. While Regional Offices have continued to apply the Reactivation Policy since the 2002 NSR Reform Rule, the 2018 Limetree Bay Letter is the only guidance or adjudication on this topic that any EPA Headquarters Office has issued since the 1999 order resolving the *Monroe Electric* Title V petition.[12]

Prior to the 2002 NSR Reform Rule, most sources determined their baseline emission rate by averaging the past 24 months, *i.e.* 2 years, of actual emissions. *See* 67 Fed. Reg. 80185, 80188 (Dec. 31, 2002).[13] If a source had not operated in the last 2 years, its baseline emission rate would therefore be zero, like a new source. This comports with the Reactivation Policy's determination that if a source had been shut down for more than two years it should be presumed to be permanently shut down and treated as a new source. The one exception to this previous 24-month baseline emission rate was if a permitting agency agreed to use a period that was "more representative of normal operations." *Id.* The criteria for rebutting the presumption in the Reactivation Policy could then essentially be thought to have provided a guide for permitting agencies to determine whether it would be appropriate to allow a source that hadn't been in operation for the previous two years to use a more representative period to calculate its baseline emission rate. But the Reactivation Policy's focus on the intent of the

[12] *In the Matter of Monroe Electric Generating Plant Entergy Louisiana, Inc.*, Petition No. 6-99-2 (June 11, 1999).

[13] In 1992, EPA revised the regulations to adopt a different approach for Electric Utility Steam Generating Units, which could then determine baseline emissions using any two of the past five years. 57 Fed. Reg. 32314 (July 21, 1992).

owner or operator to restart a stationary source was not grounded in the regulations. At best, this provided a sort of equitable framework for the permitting agency to apply under the pre-Reform rules. In addition, the multiple factors that one may consider within this framework, with no one factor being dispositive, leaves significant room for differences of opinion how to weigh those factors. And some of the factors, such as owner statements and the cause of the shutdown, are highly dependent on the interpretation of the regulator and invite speculation. An owner's statements, for example, may be made for other reasons, such as for the purpose of business negotiations, and the cause of a shutdown may be multifaceted or simply unknowable.

This makes the policy difficult to apply and can lead to inconsistent results, based on subjective judgments of those applying this policy. This should be a disfavored outcome in a regulatory environment where consistency, fairness, and clarity should be the hallmarks of policy.

Furthermore, the regulatory framework in which EPA applied the Reactivation Policy was significantly altered by the 2002 NSR Reform Rule. After the Reform Rule, a source (other than one comprised of EUSGUs) could select any 24-month period within the last ten years as the period used to establish the source's baseline emission rate. *Id.* at 80195. The EPA specifically rejected the use of a "more representative time period" in lieu of this 24-month period in the past 10 years. *Id.*[14] This rule gave source owners and operators the discretion to select a period other than the prior 24 months to determine the baseline emission rate without having to show that the selected period was representative of normal source operations. Since making the latter showing under the pre-reform NSR rules was often confusing and involved disputed judgment calls, EPA chose to replace it with a rule that gave source owners and operators discretion to choose any 24-month period within a normal business cycle, which EPA determined to be 10 years for most types of sources based on a study. 67 Fed. Reg. at 80191-92, 199-200; *See also, New York v. EPA*, 443 F.3d 3, 25–26 (D.C. Cir. 2005). EPA explained that new approach to determining baseline emissions would provide certainty that was lacking under the old one. 67 Fed. Reg. at 80200.

Under this current framework in the NSR regulations, the Reactivation Policy no longer serves the purpose that it did under the pre-Reform NSR regulations, when sources could seek to establish baseline emissions by demonstrating that emissions experienced before the last 24 months were more representative of normal operations. This is illustrated by the circumstances presented here with the Limetree Bay facility. Limetree Bay applied the current rules and selected a 24-month period within the last 10 years to establish its baseline emissions rate when it applied for and received a minor NSR permit from the Virgin Islands for the MARPOL project. This is also the approach that the EPA has taken in analyzing and issuing this PAL permit. Limetree Bay selected a 24-month period within the last ten years (as of its application for a PAL) and EPA used that period in setting the PAL, with the appropriate adjustments as required by the regulations. Limetree did not have to show that this 24-month period was representative of its normal operations. It is thus not consistent with the current approach for determining baseline emissions to then apply the Reactivation Policy to presume that refinery operations have permanently shut down based on some emissions units being idle for the past two years. Since Limetree Bay has the discretion to

[14] The EPA did continue to allow permitting agencies to select a more representative time period for Electric Utility Steam Generating Units (EUSGUs). That is not the situation here as Limetree Bay does not involve any EUSGUs.

establish baseline emissions based on its operations within the last 10 years (which includes a period before these emissions units were idled), it is not necessary to require the company to demonstrate that it did not permanently shut down the facility in this time period to enable it to restart the idled units without obtaining a major NSR permit.[15] Under the rationale for the baseline provisions in the 2002 reform rules, the idling of the refinery portions of the facility may be viewed to have occurred in the normal course of the 10-year business cycle upon which EPA based the baseline provision in the 2002 rule.

The Reactivation Policy is also undermined by other provisions of the NSR regulations. The regulations define a "new emissions unit" as an emissions unit "that is (or will be) *newly constructed* and that has *existed* for less than 2 years . . ." 40 C.F.R. § 52.21(b)(7)(i) (emphasis added). The emission units at Limetree Bay have clearly existed for more than 2 years and are not "newly constructed." Under the plain language of this provision, the emissions units at the Limetree Bay facility are existing emission units. *Id.* § 52.21(b)(7)(ii). It would be an odd result to treat a major stationary source made up entirely of 'existing' emission units as "new" for purposes of determining NSR applicability. The regulatory definition of "construction" also undermines the Reactivation Polity. This definition suggest that the "fabrication" or "erection" of an emission unit is distinct from the "modification" of an emission unit. *Id.* § 52.21(b)(8). The former suggests the new creation of an emission unit while the latter suggests the emission unit is already in existence.

Even if the physical changes necessary to restart an idled emission units are extensive—even perhaps qualifying as reconstruction under the NSPS program, 40 C.F.R. § 60.15—they are not subject to PSD unless they increase emissions, 67 Fed. Reg. at 80194 ("[EPA] decided against applying PSD to 'reconstruction,' *even of entire sources*, on the grounds that, as to existing sources that would not otherwise be subjected to PSD review as a major modification (i.e., such source would not cause a significant net emissions increase), changes that had no emission consequences should not be subject to PSD regardless of their magnitude." (emphasis added)).

While the applicability provisions in 40 C.F.R. § 52.21(a)(2)(i) say that PSD applies to the construction of a "any new major stationary source (as defined in paragraph (b)(1) of this section)," EPA's NSR regulations do not contain a definition of the term "new major stationary source" or otherwise describe what constitutes "new" for this purpose. The EPA believes the best reading of the word "new" in this context is to mean "having recently come into existence." Webster's Dictionary, https://www.merriam-webster.com/dictionary/new. The EPA recognizes that "new" can also mean the "resumption or repetition of a previous act or thing," *id.*, but in context this refers to iterations that are distinct, such as days or editions. It would stretch this concept to suggest a source after a restart is a distinct thing from the source before idling. This would also suggest that when a source restarts after a routine turn-

[15] This is not to say that all sources should be allowed to restart and use previous emissions for their baseline if they have been shut down for less than 10 years. For instance, if a source has surrendered its permits, the baseline would have to be adjusted to account for the fact that the source is no longer permitted to emit. *See* 40 C.F.R. 52.21(b)(48)(ii)(*c*). In addition, the PAL provisions require the removal of emissions from permanently shut down emission units from the calculation of the PAL. 40 C.F.R. § 52.21(aa)(6)(i). However, as discussed below both HOVENSA and Limetree Bay have retained their permits for the Refinery, so the first requirement described above is not relevant in this case. In addition, Limetree Bay complied with the second requirement described above by identifying in its PAL permit application several units that it determined were permanently shut down.

around for maintenance and it resumes operation, it is "new" source because it resumes a previous act. The absurdity of this result in the regulatory context is sufficient to refute it. Therefore, the best reading of "new" in the applicability procedures is that the source has recently come into existence.[16]

For the above stated reasons, the EPA no longer believes that the Reactivation Policy is an appropriate policy, and the Agency is not required to apply it to any source, including the Limetree Bay facility.

Nevertheless, even if EPA found cause to continue applying the Reactivation Policy here, the Agency stands by the conclusion reflected in the 2018 letter from Assistant Administrator Wehrum that Limetree Bay and HOVENSA have demonstrated a continuous intent to restart this facility. As restated in the 2018 Wehrum letter, under EPA's Reactivation Policy, "no single factor is likely to be conclusive in determining intent" and "EPA generally has considered the totality of all such factors and the relevant supporting documentation in evaluating whether there was a continuous intent to restart the facility." After considering the information provided in this comment, some of which was not provided to EPA in 2018, EPA's view is that the totality of factors and documentation continues to support the conclusion that HOVENSA and Limetree Bay displayed a continuous intent to restart this facility.

An important overall consideration that has informed EPA's evaluation of the totality of the factors bearing on the intent to restart or permanently shut down the facility is that the Limetree Bay facility has never completely shut down. Since HOVENSA ceased the refinery operations at the complex in the 2011-2012 time period, HOVENSA and Limetree Bay have continuously operated the oil storage and terminal operations, wastewater treatment plant, and power generation equipment at this location. This situation is thus unique and distinguishable from many of the circumstances cited by the commenter where EPA had expressed the view that a continuous intent to restart was not demonstrated, based in part on the complete cessation of operations at the facility.

The commenter first points to the eight-year time period that parts of the facility have been shut down. But the comment does not demonstrate why this amount of time precludes HOVENSA and Limetree Bay from showing a continuous intent to restart. This period of time invokes the presumption that the facility was permanently shut down under the Reactivation Policy, but the policy allows for rebutting that presumption. *See* Policy Determinations Regarding PSD Questions, Region VII, at 2 (Feb. 5, 1981) (finding that a boiler that had been idled for 10 years was not subject to PSD). The comment does not cite a prior circumstance where EPA or another agency found that the shutdown of this duration precluded a company from rebutting the presumption. Because the Reactivation Policy calls for looking at the totality of circumstances, it is also important to consider what the facility owners and operators were doing within the period of time that the facility was shut down. In this case, HOVENSA and Limetree have been continuing to operate portions of the facility, investing in maintenance of the idled portions of the facility, and continuing to hold permits

[16] The one exception to this would be a modification to an existing minor source that itself would constitute a major stationary source. 40 C.F.R. § 52.21(b)(1)(i)(*c*). But in this context, modified sources are treated like new sources because the Act requires that a major source obtain a PSD permit, not because modified means the same thing as new.

governing the operation of the idled equipment.

Similarly, regarding the second factor cited by the commenter, the comment does not explain how HOVENSA's reasons for shutting down portions of the facility prevent the owners from demonstrating intent to restart the facility. Corporations generally operate to make a profit and return on investment for shareholders, so financial and economic reasons will frequently be part of the motivation for shutting down a portion of a stationary source owned and operated by a corporation. Facility operations inherently ebb and flow for financial and economic reasons. EPA recognized that business flows in cycles when it revised its NSR regulations in 2002 to provide for a 10-year period from which baseline emissions may be drawn. *See New York v. EPA*, 443 F.3d at 25–26. Thus, the motivation for idling part of a facility does not seem particularly informative as to intent to restart in this case. The commenter cites two previous shutdowns that it argues EPA considered to be permanent because they were motivated by financial and economic reasons. But in the *Monroe Electric* Title V order, EPA did not actually determine that the shutdown of that facility was permanent because it had shut down for economic reasons. This order partially granted a petition to object to a title V operating permit based on the view that the facility in question had more clearly engaged in a major modification when it restarted without deciding whether the facility should be considered a new source under the reactivation policy. In the case of *Noranda Lakeshore Mines*, the source was completely shut down for at least 10 years, it had failed to maintain its operating permit, and had been removed from the state's emissions inventory. While EPA noted that the Noranda facility was shutdown "due to market conditions," this fact was not cited by EPA as a reason for its finding that the shutdown was permanent.

On the third factor the commenter addresses ("statements by the owner or operator regarding intent"), the comment does not actually cite a statement "by the owner or operator" that evidences an intent to permanently shut down refinery operations. The comment cites only one statement from the company itself, a 2012 press release from HOVENSA that said "[f]ollowing the shutdown, the complex will operate as an oil storage terminal." This appears to be simply a statement about the facts on the ground after the refinery operations were idled while the other operations were not. This statement does not appear in any way definitive regarding HOVENSA's permanent plans for the facility. The other "statements" referenced in the comment are derived from press reports, and many of those press reports are based on the perceptions of parties other than HOVENSA. The supporting information considered by Assistant Administrator Wehrum in 2018 included company statements, press releases, and various correspondence from 2011 through 2017. The commenter does not address any of this information or provide any reasons for EPA to question the credibility of these statements that are more directly attributable to the owner or operator of the facility. EPA acknowledges that some of the evidence the commenter proffers tends to show that HOVENSA pursued the option of permanently converting the facility to an oil storage and transfer facility. But this does not demonstrate that HOVENSA developed or implemented concrete plans to do so or that it abandoned the option of resuming oil refinery operations at this site. Actions can sometimes speak louder than words, and HOVENSA continued to invest in maintenance of the refinery components of the facility and retained its permits for this portion of the facility.

As to the fourth factor addressed in the comment (cost and time to reactivate), the commenter argues that Assistant Administrator Wehrum analyzed this factor backwards. But Mr.

Wehrum did not characterize the $400 million spent on maintenance as pertaining to this factor. The 2018 letter does not discuss the total cost and time that Limetree expected to be required to restart the idled portions of the facility. Rather, the $400 million spent on maintenance by HOVENSA goes to the last factor addressed by the commenter – ongoing maintenance and inspections. The magnitude of this investment in maintenance of the facility evidences an intent by the owners to restart the facility. It seems unlikely that a company that intends to permanently abandon or scrap equipment would invest hundreds of millions of dollars in its maintenance. As discussed in EPA's 2018 letter, Limetree Bay represented that the owners of the facility have maintained critical refinery equipment, such as compressors, pumps, utilities, wastewater treatment units in working order and conducted multiple walkthrough inspections at the plant. Limetree also provided a list of critical equipment and the timeline of significant maintenance activities performed at the refinery to demonstrate that the maintenance activities were performed.

For the fifth factor addressed in the comment (status of permits), the commenter dismisses the fact the company maintained its environmental permits, claiming that these same permits were also required to operate the portions of the facility that have not been idled. But the only support provided by the commenter for this conclusory statement is an EPA website compiling information on the facility's emissions and compliance with regulatory requirements.[17] The second weblink provided by commenter produced an error message.[18] The comment does not describe the content of any of these permits or show that every one of the facility's permits cover both the refinery operations and those parts of the facility that have continued to operate. The commenter does not dispute Limetree's representations that HOVENSA and Limetree maintained all environmental permits in active status and submitted timely renewal applications. Nor does the comment allege that these companies have not complied with the Refinery MACT, NSPS Subpart J, and all of the applicable RCRA regulations while the refinery units were idled. The first website cited by commenters includes compliance information that might relate to the latter considerations, but the comment does not show how any of this information is relevant to the question of whether Limetree maintained its permits. Further, the comment does not show how the information on this webpage undermines the EPA's earlier finding that maintaining such permits provides evidence of an intent by these companies to restart the refinery portions of the facility.

In the context of the fourth and sixth factors addressed in the comment, the commenter argues that prior EPA statements that a facility should be treated as permanently shut down if it cannot be restarted quickly and easily (without significant investment of time and capital) suggest the facility should be treated as permanently shut down as well. EPA acknowledges that Limetree Bay has not been able to restart the refinery operations at this facility as quickly and easily as first projected, as it does appear the company has invested substantial capital and several years of time to get these desired portions of the refinery back on line. But the focus of the Reactivation Policy has been on determining "if a source is permanently shut down." Wehrum Letter at 2. While being in a position to restart quickly and easily may be one way to show that a facility has not permanently shut down, this is not the only way. In a case such as this one where the source never completely shut down and other factors show an intent to restart those portions that were shut down, an owner or operator would not necessarily have to demonstrate that the entire source can be quickly and easily restarted to

[17] https://enviro.epa.gov/enviro/multisys2_v2.get_list?facility_uin=110000307864.
[18] https://enviro.epa.gov/enviro/fii_query_dtl.disp_program_facility.

show its intent to restart operations.

Considering the totality of circumstances, were EPA to apply the Reactivation Policy, EPA would continue to find that the presumption of permanent shutdown has been rebutted in this case. While there are some statements indicating that HOVENSA pursued the option of permanently using the facility for only product storage and transfer, EPA has not received information showing that the company had definite plans to do so or took actions at the facility site to implement such a plan. The presumption of permanent shutdown would be rebutted in this case by evidence showing that the source continued to operate in part and that the owners invested substantial sums in maintenance of the idled portions of the facility and continued to hold permits governing the operation of the idled equipment.

Regarding the commenters' request that EPA rescind the EPA's April 2018 letter based on government ethics concerns, the commenters point to only generalized allegations concerning potential past ethics violations by the former Assistant Administrator. The commenters admit they "are not aware of any evidence that the Wehrum Letter was, in itself, a direct result of misconduct." Comment at 8. Thus, these ethical allegations do not justify the withdrawal of the 2018 letter.

The statement the commenter points to regarding Limetree being considered a customer was made by one EPA official and was in reference to the coordination between multiple federal agencies and the Virgin Islands on complex multi-media permitting and approvals. That process was intended to ensure all those participating were up-to-date and informed about where in the process the agencies were, not to impact the substance of the decisions reached. Indeed, this level of coordination between federal agencies and transparency is fully consistent with congressional direction. See 42 U.S.C. 4370m et. seq. (setting out a coordination and transparency program for major federal infrastructure projects).

Comment No. 133
Commenters state that the refinery should not be reopened because of HOVENSA's past violations of the Clean Air Act and other environmental laws and that these violations caused HOVENSA to shut down.

Response 133
These comments refer to a history of noncompliance at the facility and suggest that the noncompliance led HOVENSA to cease operations. EPA did initiate an enforcement action against HOVENSA for Clean Air Act violations and the action settled in 2011 (a 2020 modification of the settlement, once entered by the U.S. District Court of the Virgin Islands, will transfer the HOVENSA's obligations to Limetree). The consent decree did not require the facility to cease operations. Rather, we understand that economic factors led HOVENSA to cease operations. Regardless of the reason for HOVENSA's decision, the PAL provisions do not provide EPA with authority to deny a PAL permit due to the applicant's history of noncompliance under either the Clean Air Act or other environmental statutes. The PAL provisions do, however, address past violations through adjustments to the baseline and PAL level and EPA has incorporated such adjustments in this permit action. The PAL provisions do, however, address past violations and related Consent Decree requirements through adjustments to the baseline and PAL level, and EPA has incorporated such adjustments in this permit action. See Letter from John Filippelli, Director, Air and Radiation Division, EPA

Region 2, to Darius Sweet, CEO, Limetree Bay Terminals, and Brian K. Lever, President, Limetree Bay Refining (Aug. 14, 2019). See also EPA Response to Comment 16.