



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R02-OAR-2012-0457, FRL-9742-6]

Approval and Promulgation of Air Quality Implementation Plans; United States Virgin Islands; Regional Haze Federal Implementation Plan

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is promulgating a Federal Implementation Plan (FIP) to address regional haze in the Territory of the United States Virgin Islands. EPA determined that the FIP meets the requirements of the Clean Air Act and EPA's rules concerning reasonable progress towards the national goal of preventing any future and remedying any existing man-made impairment of visibility in mandatory Class I areas (also referred to as the "regional haze program"). The FIP protects and improves visibility levels in the Virgin Islands Class I area, namely the Virgin Islands National Park on the island of St. John. The FIP for the Virgin Islands addresses reasonable progress toward improving visibility and evaluation of Best Available Retrofit Technology.

DATES: This rule is effective on [Insert date 30 days from date of publication in the Federal Register].

ADDRESSES: EPA has established a docket for this action under Docket ID No. **EPA-R02-OAR-2012-0457**. All documents in the docket are listed on the www.regulations.gov web site. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted

material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through www.regulations.gov or in hard copy at the Environmental Protection Agency, Region II Office, Air Programs Branch, 290 Broadway, 25th Floor, New York, New York 10007-1866. This Docket Facility is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The Docket telephone number is 212-637-4249.

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SUPPLEMENTARY INFORMATION: Throughout this document, wherever “Agency,” “we,” “us,” or “our” is used, we mean the EPA. In most cases in this document, where we use the term “state” when discussing requirements or recommendations under the Clean Air Act or Agency guidance, this includes the Territory of the Virgin Islands.

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- I. What Action is EPA Taking?**

EPA is promulgating a Federal Implementation Plan (FIP) to address regional haze in the U.S. Virgin Islands under the Clean Air Act (CAA or the Act) sections 301(a) and 110(c)(1). The FIP ensures that the Virgin Islands will make reasonable progress toward the national goal of no man-made contribution to visibility impairment. The FIP also includes Best Available Retrofit Technology (BART) determinations for sources in the Virgin Islands that may be subject to BART.

For additional details on EPA's analysis and the basis for the Virgin Islands regional haze FIP, the reader is referred to the June 25, 2012 proposal (77 FR 37842). EPA's regional haze FIP for the Virgin Islands, all accompanying documents, and the full text of the public comments are included in the Docket (EPA-R02-OAR-2012-0457) and available at www.regulations.gov.

EPA's Authority to Promulgate a FIP

The Act requires each state to develop plans to meet various air quality requirements, including protection of visibility. (CAA sections 110(a), 169A, and 169B). The plans developed by a state or territory are referred to as State Implementation Plans or SIPs. A state must submit its SIPs and SIP revisions to EPA for approval. Once approved, a SIP is federally enforceable, that is it is enforceable by EPA and citizens under the Act. If a state fails to make a required SIP submittal or if we find that a state's required submittal is incomplete or unapprovable, then EPA must promulgate a FIP to fill this regulatory gap. (CAA section 110(c)(1)).

EPA made a finding of failure to submit on January 15, 2009 (74 FR 2392), determining that the U.S. Virgin Islands failed to submit a SIP that addressed any of the regional haze SIP

requirements of 40 CFR 51.308. Under section 110(c) of the Act, whenever EPA finds that a state has failed to make a required submission, the Agency is required to promulgate a FIP.

Specifically, section 110(c) provides:

- The Administrator shall promulgate a Federal implementation plan at any time within 2 years after the Administrator--
 - finds that a state has failed to make a required submission or finds that the plan or plan revision submitted by the state does not satisfy the minimum criteria established under [section 110(k)(1)(A)], or
 - disapproves a state implementation plan submission in whole or in part, unless the state corrects the deficiency, and the Administrator approves the plan or plan revision, before the Administrator promulgates such Federal implementation plan.

Section 302(y) defines the term “Federal implementation plan” in pertinent part, as:

[A] plan (or portion thereof) promulgated by the Administrator to fill all or a portion of a gap or otherwise correct all or a portion of an inadequacy in a State implementation plan, and which includes enforceable emission limitations or other control measures, means or techniques (including economic incentives, such as marketable permits or auctions or emissions allowances)

Thus, because EPA determined that the Virgin Islands failed to submit a regional haze SIP, the Agency is promulgating a regional haze FIP at 40 CFR 52.2781(d). The Virgin Islands

Department of Planning and Natural Resources has indicated that the Government of the Virgin Islands agrees with EPA's moving forward to prepare this FIP.

If the Virgin Islands at any time decide to submit a SIP revision to incorporate provisions that would be approvable as a SIP revision for a regional haze plan, EPA would welcome that submittal. If EPA were to approve such a SIP revision, after public notice and comment, the SIP provisions would replace EPA's FIP.

II. What Comments Did EPA Receive on its Proposal and What Were EPA's Responses?

EPA received comments from the National Park Service (NPS), which serves as the Federal Land Manager (FLM) for the Virgin Islands National Park, and from HOVENSA, L.L.C. (HOVENSA). EPA also received one comment from a private citizen in support of EPA's proposal. A summary of the comments and EPA's responses are provided below.

Comment: A private citizen supported EPA's actions to reduce regional haze in the area, including the restriction of sulfur in ferry and cruise-ship fuel, the federal motor vehicle control program, and emissions reductions from HOVENSA, including the use of Best Available Retrofit Technology (BART).

The NPS also supported EPA's determination that expected emissions reductions from marine vessels under the North American Emissions Control Area and the HOVENSA Consent Decree are appropriate to include in the long term strategy for regional haze.

Response: EPA acknowledges the support and is including these emissions reductions as part of the FIP.

Comment: NPS supported EPA's determination that sources outside the island of St. John are major contributors to visibility impairment at the Virgin Islands National Park.

Response: EPA acknowledges the support for the visibility analysis.

Comment: NPS commented that it expected EPA's proposal to include a more rigorous technical analysis of local anthropogenic contributions to regional haze in the Virgin Islands.

Response: EPA disagrees with the NPS's characterization of the analysis conducted for the FIP. We identified potential contributors to visibility impairment from the IMPROVE monitoring data, as well as other suggestions from the FLM, local citizens, and the Virgin Islands government. In addition to analyzing the IMPROVE data, we investigated possible sources of coarse particles that were hard to identify due to the overwhelming impact of coarse particles from Saharan dust. EPA commissioned a thorough inventory of all source categories on St. John. EPA also used inventories from new source review applications to identify the larger point sources on St. Thomas and St. Croix that may impact the Class I area on St. John. We investigated fuel usage, electric generation and open burning information for potential sources on Tortola, the nearest island of the British Virgin Islands. Finally, we used back trajectory analyses and dispersion modeling to determine whether emissions from a major source in Puerto Rico could have an impact on visibility in St. John.

Comment: NPS commented that coarse mass could be due to transport or local sources, natural and anthropogenic, but EPA made little effort to distinguish source contributions.

Response: EPA disagrees. The FIP includes EPA's numerous efforts to address local anthropogenic sources of coarse mass. Saharan dust is mostly in the coarse mass (2.5 microns to 10 microns) range of particles. Coarse mass particles can also be produced by human sources, such as quarrying operations, wind-blown dirt from unpaved roads, and dirt on paved and unpaved roads re-entrained by vehicles. Ordinarily, coarse particles do not travel the long distances that fine particles travel because of their larger size and larger mass and because they tend to be emitted near the ground. One exception to this rule is the coarse dust from the Sahara Desert, which is lofted thousands of feet into the atmosphere by strong trade winds. This dust is carried by the trade winds for long distances, across the Atlantic Ocean, remaining aloft and mixing down into the surface air over the Caribbean islands. (Prospero, 1999. Proc. Natl. Acad. Sci. USA. 96:3396-3404.)

EPA conducted an effort to find sources of particle emissions on St. John (as well as other pollutants that contribute to reduced visibility), knowing that coarse particle emissions on St. John could be contributing to the obstruction of visibility in the Virgin Islands National Park, and because coarse particles from ground-level sources on other islands are not likely to be transported to St. John. EPA also developed an emission inventory for St. John which identified emissions from construction activities, re-entrained dirt from traffic, and a concrete mixing facility on St. John, all of which were included in the modeling to determine which human sources contribute the most to reducing visibility in the Virgin Islands National Park. EPA discussed the results of the modeling in the June 25, 2012 proposal (77 FR 37842). Air modeling

ranks construction and road dust as the two anthropogenic source categories with the highest impact on visibility at the IMPROVE monitor on St. John.

Comment: NPS believes there are episodes of elevated sulfate that could be due to industry or marine traffic or due to atmospheric transport of emissions from other islands or the U.S. mainland. NPS also suggested that episodes of elevated organic carbon are due to vegetative burning.

Response: In the June 25, 2012 proposal, EPA noted that local sulfur dioxide emissions are not the only source of sulfate on St. John. Sulfates likely come from other islands outside the U.S. Virgin Islands, and EPA included sources from the British Virgin Islands and Puerto Rico in the modeling analysis. Modeling predicts that sulfate averages from five to eleven percent of the anthropogenic contribution to visibility obstruction and can be as high as twenty-five percent. However, emissions from sources in the Caribbean upwind of the Virgin Islands cannot be reduced by actions taken by EPA or the U.S. Virgin Islands government.

Based on trajectory analyses, emissions from sources in North America may be transported to the Virgin Islands on rare occasions. However, there are many Class I areas in the United States that are closer to these sources than the Virgin Islands. Mainland sources were not considered in the modeling for the Virgin Islands FIP because state regional haze SIPs (or FIPs) will inevitably mandate stronger controls based on the sources' larger impacts on mainland Class I areas.

As for organic carbon, the IMPROVE data show a few periods of time when carbon is a major component responsible for reducing visibility. Most of these events occur after major windstorms or hurricanes when fallen trees and other vegetation are burned due to the lack of space on the island to landfill the debris.

In summary, EPA did in fact include the various source categories suggested by the NPS comment in our analysis and in the modeling conducted in support of the FIP.

Comment: NPS commented that the back trajectory analysis identified possible source areas for each pollutant species, but EPA's analysis was not comprehensive. NPS believes sources on nearby islands as well as long range transport are potential contributors to haze at St. John.

Response: Back trajectory analysis for the top four days with the largest impact for each of the measured species provides the best opportunity to find if consistent locations (and the sources located there) are upwind of St. John on the days when each species has the largest impact on visibility. As we expected, most days have trajectories from the east, the predominant direction of the wind in the tropics trade wind regime, as seen in the wind roses in the FIP. Days where a source has high contributions toward reducing visibility should show up as the source region in the trajectory analysis. For example, days when coarse particulates were highest had trajectories that began in or near the Sahara Desert. Days when coarse particulates were lower and another species was large, on the other hand, mostly had trajectories from other locations. Thus, EPA determined that looking at roughly 30 days when different species dominated would reveal the

sources of the various species that impact visibility on St. John.

However, there was no consistent source region or regions in the U.S. Virgin Islands for these high impact days for products of combustion, like sulfates and nitrates. While some days' trajectories passed over St. Thomas and St. Croix, showing that sources there can be responsible for emissions that interfere with visibility, most of the trajectories on days with high sulfate and nitrate concentrations did not pass over St. Thomas or St. Croix. Many trajectories passed over other islands where EPA does not have jurisdiction to require emission controls. EPA's modeling showed a similar pattern of combustion sources impacting St. John on a limited (but still significant) number of days. The impacts were frequent enough to warrant EPA to evaluate sources such as HOVENSA and other point sources in St. Thomas and St. Croix to determine if reasonable controls were available to improve visibility.

In response to the concerns of the Virgin Islands Government that sources upwind might affect St. John, EPA considered combustion emissions from Puerto Rico and fuel oil combustion and agricultural burning on Tortola in its modeling.

Also, a few trajectories show that some days with worse visibility may result from sulfates, nitrates, and carbon that originate in North America. It should be noted that significant reductions have occurred in sulfate, nitrate and carbon emissions from sources in the United States due to acid rain control programs, ozone and particulate matter state implementation plans and regional haze plans. Future emission reductions that will result from these programs are

likely to further reduce visibility impacts from North America.

Comment: NPS commented that it is unclear why EPA did not include emissions from St. Thomas and St. Croix and recommends EPA develop a complete inventory for the Virgin Islands. NPS commented that EPA's proposal indicated that additional point sources were considered, but the emissions were not presented.

Response: EPA disagrees that emissions from St. Thomas and St. Croix were not included and disagrees that information on other point sources was not presented. This information was only summarized in the June 25, 2012 proposal. Complete information for point sources on St. Thomas, St. Croix, and St. John is in the modeling analysis performed for EPA. A detailed emission inventory for St. John is in the supporting documentation contained in the Docket for the proposal (See: DEVELOPMENT OF 2002 REGIONAL HAZE AREA, POINT, NONROAD MOBILE, AND ONROAD MOBILE SOURCE EMISSION INVENTORIES FOR ST. JOHN, VIRGIN ISLANDS in the Appendices.) The point source inventories were developed in order to determine compliance with EPA's ambient air quality standards for sulfur dioxide, nitrogen dioxide and particulate matter. Emissions of these pollutants are important in assessing human-made obstruction to visibility. The emissions from the significant sources in these inventories are more likely to be transported across the sea to St. John than emissions from other area or mobile emission source categories that are emitted near the ground. EPA also used modeling to evaluate the potential impact of sources in Puerto Rico on St. John. The results showed that a major source on Puerto Rico would not impact visibility on St. John, so emissions from Puerto Rico

were not investigated further for inclusion in the FIP.

As stated in the June 25, 2012 proposal, rather than use a full statewide inventory to judge reasonable progress, we focused on the inventory for the island of St. John, where the Class I area is located, and other major point sources located in the Virgin Islands. Our analysis indicates that most emissions outside of St. John, other than major point sources, do not significantly impair visibility at the Virgin Islands National Park due to the prevailing winds. Prevailing winds at St. John are from the east, as shown in the wind roses contained in the FIP. St. Thomas and St. Croix are located west and south, respectively, of St. John. Therefore, these trade winds tend to transport pollution from St. Thomas and St. Croix away from the Class I area. In addition, modeling performed to estimate the visibility impact of currently operating individual sources of pollution indicates that, with the exception of HOVENSA, even very large sources in the Virgin Islands have relatively small visibility impacts on Virgin Islands National Park.

Comment: NPS commented that EPA should add marine traffic between neighboring islands to the inventory.

Response: The impact of marine traffic at St. John was included in the inventory. EPA reasonably chose not to include emissions from marine traffic between other neighboring islands, because modeling did not predict a large impact of the ship emissions on St. John.

Comment: NPS commented that EPA should have used 2009 MM5 meteorological model

outputs in its modeling. HOVENSA also commented that the use of a small set of overwater buoy data, combined with upper air sounding data from San Juan, Puerto Rico and the airport station at St. Thomas, was insufficient to satisfy EPA's own recommendations to use available prognostic data in combination with observational data.

Response: EPA chose to use four years of local meteorological data because only a single year of data was available for MM5. While using a gridded, prognostic data model to simulate meteorological conditions is likely to produce a more accurate wind field in most circumstances, this would have been difficult with just a single year of MM5 data. Using four years of data from local weather sites, on the other hand, provided EPA with a robust calculation of impacts from anthropogenic emissions in the Virgin Islands. Moreover, the use of interpolated weather data from a few sites is more likely to be accurate in the Virgin Islands than it would in the continental United States because there is less terrain across the modeling domain to disrupt wind flow and wind direction and speed is more consistent in the tropics.

Comment: NPS commented that EPA should not use the 98th percentile impact averaged over four years as a threshold.

Response: EPA agrees and modified the FIP to highlight the highest of the 98th percentile impacts for each source or source category. As a result of this change, the impact EPA will use for evaluating potential control strategies and for comparing sources' impacts will be higher than when EPA used a four-year average in the proposal.

In our proposal, we evaluated the impacts of the sources based on the average of the 98th percentile visibility impacts. Our guidance recommends using the highest 98th percentile value, not the average of the 98th percentile values. Both of these values are listed in the following table. Nonetheless, using the highest of the 98th percentile impacts did not change any of our analyses for potential controls on these sources or source categories.

Table 1. Impact of anthropogenic sources that contribute to regional haze in the Virgin Islands, based on four years of modeling from 2007 to 2010 (in deciviews (dv)).

Source or Source Category	Highest of four years' 98 th percentile impact	Average of four years' 98 th percentile impact
All Sources (w/o FIP)	10.07 dv*	8.15 dv*
All Sources after FIP reductions	9.67 (0.40 reduction)	7.79 (0.36 reduction)
St. John Construction (total of all activities)	5.72 dv	4.36 dv
HOVENSA – all units operating	3.34	2.49
St. John Road Dust	2.71	2.19
St. Croix Other (w/o WAPA, HOVENSA)	1.13	0.82
St. John Point Sources – generators	1.05	0.60
St. Thomas – all sources (inc. WAPA)	0.62	0.38
St. John Open Burning	0.58	0.42
St. Croix WAPA – all units	0.48	0.35
BVI Oil Combustion	0.46**	**
St. John Non-road Combustion Emissions	0.26	0.22
St. John Marine	0.25	0.12
Estimated BVI Open Burning Source	0.16**	**
St. John On-road Vehicle Tailpipe Emissions	0.12	0.11
St. John Residential Hot Water Heating	0.01	0.01
Sample Puerto Rico Power Plant	0.00**	**
Other Source Categories (These are included in the sources or source categories listed above)		
HOVENSA BART eligible stacks only	2.60 dv	1.91 dv
St. Thomas WAPA – all units	0.21	0.12
St. Thomas WAPA BART eligible stacks only	0.09	0.06
St. Croix WAPA BART eligible stacks only	0.12	0.09
St. John Marine with reductions	0.04 (0.21 reduction)	0.02 (0.10 reduction)

* Individual impacts from each source will not add up to the total for “All Sources”, since the impacts from each source may be on different days and times than the impact for “All Sources” together.

** Modeling from 2009 only.

BVI refers to the island of Tortola in the British Virgin Islands.

WAPA refers to the Virgin Islands Water and Power Authority.

EPA has revised Table 8 of the June 25, 2012 proposal to include the highest of the 98th percentile impacts for EPA’s BART analysis:

Revision to Table 8.

Individual BART-eligible Source Visibility Impacts on Virgin Islands Class I Area

Facility and Location	Class I Area And Locations of Modeling Receptor	Maximum 4-year 98th Percentile Visibility Impact, (deciviews)	Subject to BART?
VI WAPA St. Thomas	St. John Hassel Island, St Thomas	0.09 0.09	No
VI WAPA St. Croix	St. John Hassel Island, St Thomas	0.12 0.13	No
HOVENSA St. Croix	St. John Hassel Island, St. Thomas	2.60 3.12	Yes

The changes to the impacts for VI WAPA St. Thomas and VI WAPA St. Croix are not high enough to cause or contribute to a significant impact on visibility in the Virgin Islands National Park. Thus, neither source is eligible for further analysis for BART controls.

Comment: NPS commented that EPA should use the first high results to determine impact of sources and do a comparison to the twenty percent best days.

Response: EPA used four years of modeling data and using the first high over four years’ worth of days would be overly conservative. A comparison to the twenty percent best visibility days is often not helpful because many sources did not have any impact on the twenty percent best visibility days. (For more information, see the tables from the modeling report. The number of

days when the source had an impact is noted in parentheses.)

Furthermore, EPA's BART Guidelines call for the use of the 98th percentile (essentially the 8th highest day) rather than the maximum modeled daily impact. The BART Guidelines further state that while "the use of the 98th percentile of modeled visibility values would appear to exclude roughly 7 days per year from consideration, in our judgment, this approach will effectively capture the sources that contribute to visibility impairment in a Class I area, while minimizing the likelihood that the highest modeled visibility impacts might be caused by unusual meteorology or conservative assumptions in the model." See 70 FR 39104, 39121 (July 6, 2005).

Comment: NPS commented that EPA should have used the latest CALPOST processor.

Response: The processor used by EPA is the one in the Federal Land Managers' Air Quality Related Values Work Group (FLAG) guidance that was in effect when EPA began the modeling in 2010.

Comment: The NPS agrees with EPA that as long as HOVENSA retains its air quality permits, the Consent Decree should remain in place. NPS commented that if the refinery is to restart, an emissions control analysis should be conducted prior to restart.

Response: EPA appreciates the FLM's agreement that the HOVENSA Consent Decree should remain in place and that an analysis of reasonable control measures should be conducted when HOVENSA notifies EPA that they will resume refinery operations. In response to comments

submitted to EPA by HOVENSA, we are modifying the HOVENSA notification requirement to clarify that upon notification to EPA that HOVENSA will restart refinery operations, HOVENSA will provide emission unit information to EPA in order for EPA to assess whether additional control measures are warranted to meet the regional haze requirements.

Comment: NPS commented that it is difficult to conclude that there will be a 0.16 deciview improvement in visibility due to the expected emissions reductions from marine sources and HOVENSA. EPA should determine the reason for the increasing trends in sulfate's contribution to visibility impairment.

Response: The emission reductions leading to a 0.16 deciview improvement over the worst twenty percent visibility days are based on emission control strategies that have been adopted and will be implemented, so EPA is confident that these emission reductions will lead to improvements in visibility, especially on the days with the largest degradation due to anthropogenic sources. On the 98th percentile days, the improvement is as large as 0.53 deciviews.

EPA disagrees that an analysis of the increasing trends in sulfate's contribution to visibility impairment is required to be part of the FIP. Concentrations vary from year to year and some of the variability may be due to imprecision in the sampling and analysis of the particles that obstruct visibility. EPA will evaluate changes in sulfate, and all other contributing factors to visibility impairment, as part of the five-year review.

Comment: The FLMs want EPA to more substantively involve them in future discussions for regional haze in the Virgin Islands.

Response: EPA understands that it is important to increase FLM involvement in technical issues related to regional haze in the Virgin Islands, especially via informal sharing of new information and improvements in the FIP.

Comment: HOVENSA stated that EPA's regional haze rules indicate that the states should consider whether it is reasonable to aim for attainment of the national goal, and that the 2064 target date and the resulting glidepath are not in any way binding.

Response: EPA acknowledges that the 2064 target date and the glidepath for meeting the goal are not directly enforceable. In our June 25, 2012 proposal, we indicated in Table 6 that while a 1.48 deciview improvement is needed to reach the uniform rate of progress goal for 2018, EPA's proposed FIP is only projecting a 2018 improvement of 0.16 deciviews (the Reasonable Progress Goal).

Comment: HOVENSA commented that EPA has no rational basis for applying the Regional Haze Rule (RHR) to the Virgin Islands because there are no U.S. possessions that can impact visibility in the Virgin Islands. EPA's RHR declares that regional haze is from sources over a wide geographic area.

Response: EPA disagrees. The requirement to submit a regional haze SIP applies to all 50 states, the District of Columbia and the Virgin Islands. The RHR (64 FR 35714, July 1, 1999) specifically states that “Hawaii, Alaska, and the Virgin Islands would be subject to the regional haze provisions because of the potential for emissions from sources within their borders to contribute to regional haze impairment in Class I areas also located within their own jurisdiction” (64 FR 35720).

Therefore, sources in the Virgin Islands that impact the Virgin Islands National Park are not exempted from the Clean Air Act’s regional haze requirements to protect visibility in Class I areas.

Comment: HOVENSA objected to EPA’s proposal for the facility to provide a reasonable control measures study, consistent with the RHR, should HOVENSA resume operation of the refinery process units. HOVENSA asked EPA to remove this requirement from the final FIP.

Response: EPA proposed the requirement for HOVENSA to submit an analysis of reasonable control measures in the event that HOVENSA resumes operation of any refinery process units as an alternative to requiring such an analysis at this time. While refinery operations are currently idled, HOVENSA has retained its air permits and has not surrendered them to EPA. Therefore, EPA cannot rely on the idling of HOVENSA’s refinery operations as an enforceable emission reduction for meeting the regional haze requirements. As we stated in our June 25, 2012

proposal (77 FR 37856), while there is uncertainty at this time regarding future operations at HOVENSA, the Consent Decree, which is enforceable by EPA, contains emission reductions and emission limitation requirements. These Consent Decree requirements allow us to project that, should HOVENSA resume operating as a refinery, its permitted emissions of sulfur dioxide will be lower than they were prior to entry of the Consent Decree

Because the facility is in an idled state and HOVENSA has not provided any possible future refinery operating scenarios, EPA determined that it was not practical to require HOVENSA to perform an analysis of reasonable control measures at this time. In addition, EPA believed that should refinery operation resume, HOVENSA may decide to operate certain emission units and pollution control equipment but not others, compared to emission units that operated before the refinery operations were idled. Nevertheless, in response to HOVENSA's comments, EPA agrees that resuming operations at HOVENSA does not need to wait for HOVENSA to first provide an analysis of reasonable control measures. So, we are modifying the notification requirement to clarify that upon notification to EPA that HOVENSA will restart refinery operations, HOVENSA will provide emission unit information to EPA in order for EPA to assess if additional control measures are warranted to meet the regional haze requirements.

Comment: HOVENSA stated that EPA's FIP should reflect the determination that HOVENSA's compliance with the terms of the Consent Decree satisfies its regional haze obligations during the first planning period of the program and that any changes to the refinery's compliance obligations would be evaluated as part of the five year review.

Response: HOVENSA's comment specifically says that HOVENSA's compliance with the terms of the Consent Decree satisfies its regional haze obligations. In fact, the HOVENSA Consent Decree is not an analysis of reasonable control measures as required for regional haze. The Consent Decree was developed for entirely different reasons. A consent decree is a negotiated agreement, and was not evaluated for meeting the requirements for a reasonable control measure analysis required for regional haze. EPA decided it was not practical for HOVENSA to perform an analysis of reasonable control measures while its refining process is idled. EPA believes the information necessary to complete such an analysis will be more complete when HOVENSA's future operational plans are known. The Consent Decree is a starting point for an analysis of reasonable control measures until more information is available.

As for evaluating any changes to the refinery's compliance obligations during the five year review, EPA believes that determining what controls are reasonable when those controls would be needed, that is, when emission units are operating, would better serve the purpose of meeting the regional haze plan for the Virgin Islands.

Comment: HOVENSA states that it would be unreasonable to impose the costs of controls on its facility when there will be little or no improvement in visibility on St. John.

Response: Modeling the controls required under the Consent Decree shows an improvement of 0.13 deciviews, compared to HOVENSA's total impact of 1.60 deciviews in visibility on St.

John for the twenty percent worst visibility days. If the refining process restarts, reasonable controls may add to this improvement because HOVENSA has a total impact of 3.34 deciviews on the highest 98th percentile day.

Comment: HOVENSA stated that EPA's requirement for HOVENSA to perform an analysis of reasonable controls on its emissions before restarting its refining facility would cause uncertainty and delays in any restart process because EPA is requiring installation of controls no later than five years after the effective date of the revised FIP.

Response: As stated earlier, in response to HOVENSA's comments, we are modifying the HOVENSA notification requirement to clarify that upon notification to EPA that HOVENSA will restart refinery operations, HOVENSA will provide emission unit information to EPA in order for EPA to determine if additional control measures are warranted. However, HOVENSA's comments do not accurately reflect the timing for installation of controls as a result of the notification requirement. If and when HOVENSA notifies EPA that it plans to resume operation of the refinery process units, EPA will assess whether additional control measures are warranted to meet the regional haze requirements. Should EPA determine that additional emissions controls are necessary, HOVENSA will have considerable time to prepare for their installation while EPA undertakes notice-and-comment rulemaking to revise the FIP. Once the rulemaking is complete, HOVENSA will then have up to five years from the effective date of the revised FIP, if there is one, to install controls. In other words, EPA's requirement to install controls as expeditiously as practicable but no later than five years after the effective date

of the revised FIP is referring to this “second,” or revised FIP, not the FIP being promulgated in this action. While EPA agrees that the rulemaking process presents uncertainty as to what controls will ultimately be determined to be reasonable, it is likely that some of these controls may already be installed upon startup of HOVENSA’s refinery operations due to other Clean Air Act requirements. If not, HOVENSA will have up to five years from the effective date of the revised FIP to install them. EPA notes that HOVENSA’s comment that EPA’s proposed reasonable measures analysis requirement will present uncertainty and delay to any reactivation process contradicts HOVENSA’s other comment, requesting EPA to rely on the five-year review process for determining whether to change HOVENSA’s compliance obligations. Relying on the five-year review would present its own uncertainties and possible delays.

Comment: HOVENSA commented that by using potential emissions, rather than actual emissions, for the modeling and BART analysis, EPA has greatly overstated HOVENSA’s impacts on the Class I area in St. John.

Response: HOVENSA cites EPA guidance as recommending using the highest typical emissions from a BART-eligible source for BART modeling. EPA chose to use potential to emit rather than historical emissions, resulting in a more conservative approach than using HOVENSA’s historical emissions. HOVENSA has been operating at low capacity in recent years [Letter from HOVENSA to Mr. Steve Riva, EPA Region 2, April 21, 2011], so historical emissions are not representative of the impact that HOVENSA would have on visibility at the Class I area when operating near or at full capacity. Thus, EPA is using the emissions that the facility is allowed to

emit in its evaluation of impacts on visibility obscuration in the Class I area.

Comment: HOVENSA commented that EPA's back trajectory modeling for the worst days of visibility impairment on St. John shows that sources on St. Croix did not contribute to any of the worst days of visibility impairment.

Response: EPA does not agree with HOVENSA's interpretation of the trajectory analysis. One of the four days when sulfates have their highest contributions to visibility impairment on St. John, trajectories passed very near St. Croix, where the HOVENSA refinery is located. In addition, modeling predicts that HOVENSA has a significant impact on visibility in the Virgin Islands National Park on St. John, so if reasonable controls on emissions are available from HOVENSA, they will reduce this significant impact on the view in the Park.

Comment: HOVENSA commented that EPA's assertion that HOVENSA's emissions affect visibility on St. John stands in sharp contrast to EPA's own conclusion that coarse particles are the primary source of visibility impairment on St. John and that most of the coarse particles come from wind-blown sea salt and Saharan dust.

Response: Even though coarse particles from Saharan dust may be the largest contributor to visibility impairment on St. John, that does not mean that HOVENSA, or other human sources of emissions do not affect visibility on St. John as well. In the trajectory analysis, one of the four highest days of sulfate impairment does occur when the trajectory passes near St. Croix. Also,

the modeling analysis shows that HOVENSA is likely to have an impact on visibility on St. John. Because winds that bring Saharan dust come from the east and winds that bring emissions from St. Croix are from the south, it is likely that these two visibility-impairing sources impact St. John at different times. Thus, emissions from HOVENSA may be noticeable on St. John as sulfate haze.

Comment: HOVENSA commented that because natural background visibility values do not include important natural sources, the natural background visibility is biased low and the relative CALPUFF modeled source impacts are thereby overestimated.

Response: EPA disagrees that not including natural sources, like Saharan dust, in the natural background values means that CALPUFF's impacts are overestimated. CALPUFF's impacts are independent of, and not affected by, the estimates of natural background. When we compare the modeled sulfates and nitrates with the observed sulfates and nitrates from the IMPROVE site data, the modeled sulfates and nitrates are less than the observed. The comparison indicated that if CALPUFF is not estimating the impacts of anthropogenic sources correctly, it is likely to be underestimating the anthropogenic source impact. Thus, HOVENSA's impact may be higher than modeled by CALPUFF.

Comment: HOVENSA commented that emission reductions from its facility are not going to have a discernible effect on visibility on St. John because EPA's proposal indicated that the effect of sulfate controls on industrial sources is overwhelmed by the impact of natural sulfate

and Saharan dust.

Response: While the effect of natural emissions is very large in the Virgin Islands, the Clean Air Act requires EPA to reduce the effect of anthropogenic sources using measures that EPA determines are reasonable. Thus, even though human-caused emissions may be low compared to the impact of Saharan dust, they are still significant (up to 7.38 deciviews on the twenty percent worst days, with as much as 1.60 deciviews from HOVENSA's impact). Reducing anthropogenic emissions will still improve visibility in the Virgin Islands National Park, as sulfates and nitrates, which are mostly from combustion sources, cause significant reductions in visibility according to the IMPROVE data.

Comment: HOVENSA notes that EPA's guidance emphasizes using a blended prognostic meteorological model, like MM5, instead of observational data using CALMET. EPA should not base its recommended controls on such a simplistic meteorological data set.

Response: See EPA's response to the NPS's comment on this issue above. In addition, if using MM5 to drive the meteorology in the CALPUFF model gave better performance, remodeling would be more likely to increase impacts from anthropogenic sources, like HOVENSA.

III. What are EPA's Conclusions?

EPA is promulgating a Federal Implementation Plan for Regional Haze for the Territory of the United States Virgin Islands. This FIP addresses progress toward reducing regional haze for the

first implementation period ending in 2018. The FIP includes emission reductions to begin the reasonable progress needed to achieve the overall objective of no man-made interference with visibility by 2064. The FIP relies on emission reductions from existing emissions controls and programs currently in effect and requires HOVENSA to notify EPA in the event it resumes operation of the refinery process units and to provide emission unit information to EPA. EPA is taking this action pursuant to CAA sections 110(c) (1), 301(a), 169A and 169B. EPA solicited public comments on the issues discussed in this document and considered these comments before taking final action. EPA is promulgating 40 CFR 52.2781(d) “Regional Haze Plan for the Virgin Islands National Park.”

VI. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action will promulgate requirements for one facility and is therefore not a rule of general applicability. This type of action is exempt from review under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011).

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* Burden is defined at 5 CFR 1320.3(b). Because this FIP only applies to one facility, the Paperwork Reduction Act does not apply.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will

not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) a small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this action on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. The net result of this FIP action is that EPA is promulgating emission controls on selected units at only one facility. The facility in question is a large petroleum refinery that is not owned by a small entity, and therefore is not a small entity.

D. Unfunded Mandates Reform Act (UMRA)

This rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. It is a rule of particular applicability that affects only one facility in the United States Virgin Islands. Thus, this rule is not subject to the requirements of sections 202 or 205 of UMRA.

This rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. This rule only applies to one facility in the United States Virgin Islands.

E. Executive Order 13132 Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This action addresses the United States Virgin Islands not meeting its obligation to adopt a SIP that meets the regional haze requirements under the CAA. Thus, Executive Order 13132 does not apply to this action. Although section 6 of Executive Order 13132 does not apply to this action, EPA did consult with the Virgin Islands government in developing this action.

F. Executive Order 13175

This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000), because the action EPA is taking neither imposes substantial direct compliance costs on tribal governments, nor preempts tribal law. It will not have substantial direct effects on tribal government. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

EPA interprets EO 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5-501 of the EO has the potential to influence the regulation. This action is not subject to EO 13045 because it implements specific standards established by Congress in statutes. However, to the extent this rule will limit emissions, the rule will have a beneficial effect on children's health by reducing air pollution.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (“NTTAA”), Public Law No. 104-113, 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This action does not involve technical standards. Today’s action does not require the public to perform activities conducive to the use of voluntary consensus standards. Therefore, EPA did not consider the use of any voluntary consensus standards.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994), establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-

income populations in the United States.

We have determined that this rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population. This rule has the potential to limit emissions of NO_x, SO₂ and PM_{2.5} from one facility should that facility resume operations.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. Section 804 exempts from section 801 the following types of rules (1) rules of particular applicability; (2) rules relating to agency management or personnel; and (3) rules of agency organization, procedure, or practice that do not substantially affect the rights or obligations of non-agency parties. 5 U.S 804(3). EPA is not required to submit a rule report regarding today's action under section 801 because this is a rule of particular applicability.

L. Judicial Review

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by **[Insert date 60 days from date of publication in the Federal Register]**. Pursuant to CAA section 307(d)(1)(B), this action is subject to the requirements of CAA section 307(d) as it promulgates a FIP under CAA section 110(c). Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. See CAA section 307(b)(2).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Dated: October 15, 2012

Lisa P. Jackson
Administrator.

Part 52, chapter I, title 40 of the Code of Federal Regulations is amended as follows:

PART 52 – APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

1. The authority citation for part 52 continues to read as follows:

AUTHORITY: 42 U.S.C. 7401 et seq.

Subpart CCC – Virgin Islands

2. Section 52.2781 is amended by adding paragraph (d) to read as follows:

§ 52.2781 Visibility protection.

* * * * *

(d) Regional Haze Plan for Virgin Islands National Park. The regional haze plan for the Virgin Islands consists of a Federal Implementation Plan entitled: “FEDERAL IMPLEMENTATION PLAN FOR REGIONAL HAZE FOR THE UNITED STATES VIRGIN ISLANDS.” The applicable requirements consist of:

(1) *Applicability.* This section addresses Clean Air Act requirements and EPA’s rules to prevent and remedy future and existing man-made impairment of visibility in the mandatory Class I area of the Virgin Islands National Park through a Regional Haze Program. This section applies to the owner and operator of HOVENSA L.L.C. (HOVENSA), a petroleum refinery located on St. Croix, U.S. Virgin Islands.

(2) *Definitions.* Terms not defined below shall have the meaning given them in the Clean Air Act or EPA’s regulations implementing the Clean Air Act. For purposes of this section:

NO_x means nitrogen oxides.

Owner/operator means any person who owns, leases, operates, controls, or supervises a facility or source identified in paragraph (d)(1) of this section.

PM means particulate matter.

Process unit means any collection of structures and/or equipment that processes, assembles, applies, blends, or otherwise uses material inputs to produce or store an intermediate or a completed product. A single stationary source may contain more than one process unit, and a process unit may contain more than one emissions unit. For a petroleum refinery, there are several categories of process units that could include: those that separate and/or distill petroleum feedstocks; those that change molecular structures; petroleum treating processes; auxiliary facilities, such as steam generators and hydrogen production units; and those that load, unload, blend or store intermediate or completed products.

SO₂ means sulfur dioxide.

Startup means the setting in operation of an affected facility for any purpose.

(3) *Reasonable Progress Measures*. On June 7, 2011, EPA and HOVENSA entered into a Consent Decree (CD) in the U.S. District Court for the Virgin Islands to resolve alleged Clean Air Act violations at its St. Croix, Virgin Islands facility. The CD requires HOVENSA, among other things, to achieve emission limits and install new pollution controls pursuant to a schedule for compliance. The measures required by the CD reduce emissions of NO_x by 5,031 tons per year (tpy) and SO₂ by 3,460 tpy. The emission limitations, pollution controls, schedules for compliance, reporting, and recordkeeping provisions of the HOVENSA CD constitute an element of the long term strategy and address the reasonable progress provisions of 40 CFR 51.308(d)(1). Should the existing federally enforceable HOVENSA CD be revised, EPA will reevaluate, and if necessary, revise the FIP after public notice and comment.

(4) *HOVENSA requirement for notification*. HOVENSA must notify EPA 60 days in advance of startup and resumption of operation of refinery process units at the HOVENSA, St. Croix, Virgin Islands facility. HOVENSA shall submit such notice to the Director of the Clean Air and Sustainability Division, U.S. Environmental Protection Agency Region 2, 290 Broadway, 25th Floor, New York, New York, 10007-1866. HOVENSA's notification to EPA that it intends to startup refinery process units must include information regarding those emission units that will

be operating, including unit design parameters such as heat input and hourly emissions, information on potential to emit limitations, pollution controls and control efficiencies, and schedules for compliance. EPA will revise the FIP as necessary, after public notice and comment, in accordance with regional haze requirements including the “reasonable progress” provisions in 40 CFR 51.308(d)(1). HOVENSA will be required to install any controls that are required by the revised FIP as expeditiously as practicable, but no later than 5 years after the effective date of the revised FIP.