UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

SUPPLEMENTAL FACT SHEET

October 20, 2021

Outer Continental Shelf Preconstruction Air Permit
130 MW Offshore Windfarm
South Fork Wind, LLC

Offshore Renewable Wind Energy Development
Renewable Energy Lease Area OCS-A 0517
EPA Draft Permit Number
OCS-R1-04

Acronyms and Abbreviations

BACT	Best Available Control Technology
BOEM	Bureau of Ocean Energy Management
CAA	Clean Air Act
CA SIP	California State Implementation Plan
CERC	Continuous Emission Reduction Credit
C.F.R.	Code of Federal Regulations
CH_4	Methane
CO	Carbon monoxide
COA	Corresponding onshore area
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
CZMA	Coastal Zone Management Act
DEIS	Draft Environmental Impact Statement
DERC	Discrete Emission Reduction Credit
EAB	Environmental Appeals Board
EGRID	Environmental Protection Agency's Emissions & Generation Resource Integrated Database
EPA	United States Environmental Protection Agency
EJ	Environmental Justice
ERC	Emission Reduction Credit
ESA	Endangered Species Act
FWS	U.S. Fish and Wildlife Service
g/kw-hr	Grams per kilowatt-hour
H_2SO_4	Sulfuric acid
HAP	Hazardous Air Pollutant
ISO NE	ISO New England
KV	Kilovolt
KW	Kilowatt
LAER	Lowest Achievable Emission Rate
MassDEP	Massachusetts Department of Environmental Protection
MW	Megawatt
NHPA	National Historical Preservation Act
NMFS	National Marine Fisheries Service
NMHC	Non-methane hydrocarbons
NNSR	Nonattainment New Source Review
N_2O	Nitrous oxide
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides
OCS	Outer Continental Shelf
OECLA	Offshore Export Cable Laying Activities
OSS	Offshore Substation
Pb	Lead
PM	Particulate matter

PM_{10}	Particulate matter with an aerodynamic diameter less than or equal to 10 microns
$PM_{2.5}$	Particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
PSD	Prevention of Significant Deterioration
PTE	Potential to emit
SIL	Significant Impact Levels
SO_2	Sulfur dioxide
tpy	Tons per year
SFW	South Fork Wind, LLC
VOC	Volatile organic compounds
WA	Work Area
WTG	Wind Turbine Generators

Table of Contents

I. General Information

Applicant's name and address:	South Fork Wind, LLC 56 Exchange Terrace, Suite 300 Providence, RI 02903
Location of regulated activities:	Outer Continental Shelf (OCS) Lease Area 0517 is located in federal waters southwest of Martha's Vineyard, Massachusetts.
Draft OCS permit number:	OCS-R1-04
EPA contact:	Undine Kipka Air Permits, Toxics, and Indoor Programs Branch EPA Region 1 5 Post Office Square Suite 100 (05-2) Boston, MA 02109-3912 Telephone: (617) 918-1335 Email: kipka.undine@epa.gov

On February 1, 2019, Deepwater Wind South Fork, LLC (or the applicant, now South Fork Wind, LLC (SFW)) submitted to EPA Region 1 (EPA) an initial application requesting a Clean Air Act (CAA or the Act) permit under Section 328 of the CAA for the construction and operation of an offshore windfarm, including export cables, on the Outer Continental Shelf (OCS). SFW has an agreement under which the Long Island Power Authority has committed to purchase 130 MW generated from the windfarm.[1] On September 30, 2020, SFW submitted a revised application which was deemed complete on January 13, 2021. The EPA proposed a draft permit containing the applicable requirements under its OCS permit program regulations (40 C.F.R. Part 55) on June 24, 2021. Since the initial public comment period on the draft permit, EPA Regional Offices and Headquarters have undertaken an assessment of the application of the offset requirements under the Nonattainment New Source Review (NNSR) program to OCS sources subject to Part 55. As a result of EPA's assessment, EPA is now proposing that the emission offset requirements under the CAA and NNSR regulations do not apply to construction emissions on the OCS. Therefore, EPA is requesting comment on a revision to the draft permit for SFW to no longer require offsets for construction emissions. The revised draft permit maintains control technology requirements for OCS sources engaged in construction activities, and the requirement in the permit to obtain offsets for operational emissions remains unchanged. EPA is also taking this opportunity to correct typographical errors and include provisions that

[1] Although the windfarm was originally proposed as a 90 MW project, the Long Island Power Authority agreed to purchase an additional 40 MW in November 2018. See: https://www.lipower.org/wp-content/uploads/2019/10/LIPA-First-Offshore-Wind-Farm-Doc-V19_102819-FINAL.pdf. The additional power will be generated from an updated turbine design and the change in maximum capacity has no impact to air pollution control requirements included in this permit.

were inadvertently omitted from the initial draft permit. The basis for all other elements of the draft permit is explained in the June 24, 2021 fact sheet. This supplemental fact sheet supersedes the discussion of the NNSR offset requirements in Section VI. B. of the June 24 fact sheet and provides EPA's basis for revising the offset requirements for construction emissions in this action.

The EPA prepared this Supplemental Fact Sheet and has revised the draft OCS air permit in accordance with 40 C.F.R. Part 124 - Procedures for Decision Making. All CAA permitting requirements are contained within EPA permit number OCS-R1-04.

The revised draft permit is based on the information and analysis provided by the applicant and the EPA's own technical expertise. This Supplemental Fact Sheet describes EPA's reasoning for the revisions to the draft permit and contains supporting information and analysis on the NNSR offset requirements reflected in the revised draft permit. The changes to the initial draft permit are summarized below.

1. EPA has added a Table of Contents and made other minor formatting changes to enhance the organizational structure of the Revised Draft Permit.

2. EPA corrected the citation in Condition IV.B.2 of the Revised Draft Permit to reflect the appropriate reference to the emission limits in 40 C.F.R. §1039. EPA identified the Tier 4 engine requirements in §1039 as the Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) for the engines on the Wind Turbine Generators (WTGs) and Offshore Substation (OSS) in the June 24, 2021 Fact Sheet for the initial draft permit, but inadvertently referenced the emission limits in 40 C.F.R. §1042 in Condition IV.B.2 of the initial draft permit in error. *See* Section V.B.3 and VI.A.1 of EPA's June 24, 2021 Fact Sheet. EPA is also clarifying the specific emission limits from §1039 that apply to the engines proposed by SFW for installation on the WTGs and OSS in the revised draft permit.

3. EPA corrected a typographical error in Condition IV.C.7 of the Revised Draft Permit to reflect the appropriate reference to Condition IV.C.6 of the Revised Draft Permit.

4. EPA removed the requirement to obtain offsets for construction emissions in Section V of the Revised Draft Permit. The requirement to obtain offsets for operational emissions remains unchanged.

5. The Recordkeeping requirements in Section VIII of the Revised Draft Permit were modified to include emission calculation methods for NOx emissions during the operational phase of the project. EPA also clarified which recordkeeping requirements are applicable during the construction phase and operational phase of the project.

6. EPA added a requirement to maintain records necessary for the annual Source Registration/Emission Statement to ensure compliance with Condition IX.8 of the permit.

7. EPA removed the requirement to report NOx emissions offsets obtained during the construction phase of the project.

8. EPA added conditions to the reporting requirements in Section IX of the revised draft permit requiring the Permittee to submit an annual certification that provides for the status of compliance with the terms and conditions of the permit for the previous calendar year. This requirement was discussed in Section IX of EPA's June 24, 2021 Fact Sheet and intended for inclusion in the draft permit, but was inadvertently omitted from the initial draft permit in error.

II. Outer Continental Shelf Source Requirements

As explained in the initial fact sheet for this action, CAA 328 § (a)(4)(C) defines an "OCS source" as "any equipment, activity, or facility which: (1) emits or has the potential to emit any air pollutant; (2) is regulated or authorized under the Outer Continental Shelf Lands Act (OCSLA); and (3) is located on the OCS or in or on waters above the OCS. Such activities include, but are not limited to, platform and drill ship exploration, construction, development, production, processing, and transportation."

CAA 328 § (a)(1) adds that "[f]or such sources located within 25 miles of the seaward boundary…, [the] requirements [to control air pollution from OCS sources] shall be the same as would be applicable if the source were located in the Corresponding Onshore Area[2], and shall include, but not be limited to, State and local requirements for emission controls, emission limitations, offsets**,** permitting, monitoring, testing, and reporting."

Regarding offsets specifically, the OCS permitting implementing regulations at 40 CFR part 55.5(d) restate the CAA requirement: "offsets shall be obtained based on the applicable requirements of the COA [Corresponding Onshore Area] . . ."[3] Thus, if the COA, for example, is not attaining one or more National Ambient Air Quality Standards (NAAQS), a proposed OCS source needs to show compliance with the applicable NNSR requirements for any pollutant not attaining the NAAQS in the COA.

[2] Per CAA § 328 (a)(4)(B), the term "corresponding onshore area" means, with respect to any OCS source, the onshore attainment or nonattainment area that is closest to the source, unless the Administrator determines that another area with more stringent requirements with respect to the control and abatement of air pollution may reasonably be expected to be affected by such emissions. Such determination shall be based on the potential for air pollutants from the OCS source to reach the other onshore area and the potential of such air pollutants to affect the efforts of the other onshore area to attain or maintain any Federal or State ambient air quality standard or to comply with the provisions of part C of subchapter I of this chapter.

[3] In 1994, the United States Court of Appeals for the District of Columbia Circuit vacated part of EPA's OCS regulations pertaining to offset requirements for not treating OCS sources within 25 miles of the seaward boundary in the same manner that sources in the COA are treated. The Court held the CAA "requires that OCS sources within 25 miles of shore be subject to offset requirements identical to those applicable to sources in the corresponding onshore area." Santa Barbara Cty. Air Pollution Control Dist. v. U.S. E.P.A., 31 F.3d 1179, 1180 (D.C. Cir. 1994).

III. Nonattainment New Source Review Requirements

Federal and state NNSR regulations specify that new major stationary sources or major modifications to an existing major source within an area not attaining one or more NAAQS are subject to the NNSR program and must obtain a NNSR preconstruction permit prior to commencing construction.

A NNSR permit ensures that the increased emissions from a new or modified source are controlled to the greatest degree possible; that offsetting emissions reductions (emission offsets) equal to or higher than the proposed emissions from the new or modified source are obtained from existing sources; and that there will be reasonable further progress toward attainment of the NAAQS.

The Commonwealth of Massachusetts (hereinafter, Massachusetts) is the COA for this action. Consequently, the NNSR requirements that apply to SFW are derived from the Massachusetts NNSR program, which is implemented under 310 CMR 7.00, Appendix A. These regulations have been approved by EPA as meeting the requirements of EPA's regulations at section 40 C.F.R. 51.165, which implements the statutory NNSR requirements discussed below. Within Massachusetts, Dukes County is currently designated as a marginal nonattainment area for the 2008 ozone NAAQS. *See* 40 C.F.R. § 81.322. However, portions of the OCS source are closer to Bristol County, Massachusetts, than they are to Dukes County, and Bristol County is not a nonattainment area for ozone. Nevertheless, because Massachusetts is part of the Ozone Transport Region (OTR)[4], and areas within the OTR are treated, at a minimum, as moderate nonattainment areas for ozone, the ozone precursors NOx and VOC are subject to the state's NNSR program requirements. *See* 40 C.F.R. 51.166(i)(2). With Massachusetts being part of the OTR and considering the Dukes County nonattainment area's status, SFW is subject to the NNSR program if emissions of NOx or VOC from a new or modified source exceed Massachusetts's NNSR applicability thresholds of 50 tpy.

There are four main elements for meeting the NNSR permitting requirements. First, sources are required to offset their NNSR pollutant emissions prior to commencing operation. Second, sources must comply with emissions limitations based on the Lowest Achievable Emissions Rate (LAER), as defined in 310 CMR 7.00, Appendix A, for all applicable emission units. Third, sources should conduct an analysis of alternative sites, sizes, production processes, and environmental control techniques (commonly known as the "alternative sites analysis") that demonstrates that the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction or modification. Finally, all stationary sources in Massachusetts owned or operated by the owner or operator of the proposed source must be in compliance, or on a federally enforceable schedule of compliance, with all applicable emissions limitations and standards under the CAA (also known as the "compliance at other facilities" analysis). The South Fork windfarm exceeds the major source threshold for NOx, and therefore must fulfill these NNSR requirements. Please refer to Section VI of EPA's June 24, 2021 fact sheet for the initial draft permit for an explanation of the NNSR requirements

[4] In the CAA amendments of 1990, Congress created the OTR, located in the northeast portion of the country, to address ozone formation due to transport of air emissions. Congress included all of Massachusetts as one of the states or commonwealths within the OTR.

for "Lowest Achievable Emission Rate," "Alternative Site Analysis," and "Compliance at Other Facilities." EPA's analysis of the offset requirements applicable to SFW in the Revised Draft Permit is included in Section IV of this Supplemental Fact Sheet.

IV. Application of NNSR Offset Requirements to OCS Sources

A. Statutory and Regulatory Offset Requirements

EPA and state/local permitting authorities implementing the NNSR program have interpreted the NNSR CAA requirements as only requiring offsets for operating emissions, not construction emissions. This is supported by text in the Clean Air Act and is reflected in EPA regulations.

Section 173 (a)(1)(A) of the CAA[5] ties actual emissions reductions from offsetting measures to the operation phase of a project, stating that the NNSR program "shall provide that permits to construct and operate may be issued if . . . the permitting agency determines that by the time the source is to *commence operation*, sufficient offsetting emissions reductions have been obtained..." (emphasis added). Similarly, the second sentence of section 173 (c)(1) says that "[s]uch emission reductions shall be, by the time a new or modified source commences operation, in effect and enforceable…" This specific language regarding the timing of when offsets are needed has informed EPA's understanding of the first sentence in CAA § 173(c)(1), which does not speak to construction or operating emissions, and states that "[t]he owner or operator of a new or modified major stationary source may comply with any offset requirement in effect under [CAA § 173] for increased emissions of any air pollutant only by obtaining emission reductions of such air pollutant from the same source or other sources in the same nonattainment area, except that the State may allow the owner or operator of a source to obtain such emission reductions in another nonattainment area if (A) the other area has an equal or higher nonattainment classification than the area in which the source is located and (B) emissions from such other area contribute to a violation of the national ambient air quality standard in the nonattainment area in which the source is located…"

The federal regulations at 40 CFR § 51.165 that set forth the requirements for approving state and local NNSR programs are silent on the offset requirements for construction emissions. However, EPA has expressly excluded construction emissions from another NNSR regulation, which began as the Emissions Offset Interpretative Ruling, and was later codified at 40 C.F.R. Part 51, Appendix S.

Part 51, Appendix S applies when an area that is transitioning from attainment to nonattainment for one or more NAAQS does not yet have EPA-approved regulations in place for implementing NNSR and for major sources locating in nonattainment areas in Indian country. In section IV.B., Appendix S states the following: "[t]emporary emission sources, such as pilot plants, portable facilities which will be relocated outside of the nonattainment area after a short period of time, and *emissions resulting from the construction phase of a new source*, are exempt from Conditions 3

[5] 42 U.S.C. § 7503(a)(1)(A).

and 4 of this section," in which Conditions 3 and 4 specify the requirements to obtain emission offsets (emphasis added). Thus, under this provision, in areas subject to Appendix S, construction emissions need not be offset. Furthermore, EPA has previously clarified that it was not the intent of the Emissions Offsets Interpretive Ruling at Part 51, Appendix S to cover emissions from projects "that occur for only a relatively short period of time and are associated with the construction of a new project."[6]

The Massachusetts NNSR regulations at 310 C.M.R. 7.00, Appendix A, which apply in this case since Massachusetts is the COA for this action, do not address the application of offset requirements to construction emissions. Nevertheless, in practice, Massachusetts has not required offsets for construction emissions in permits issued under its approved NNSR program, consistent with EPA's regulation in 40 C.F.R. Part 51, Appendix S and the language in section 173 of the CAA described above. This Massachusetts practice is also consistent with the practice in other states, one of which has a regulation that expressly excludes construction emissions from the offset requirement in its NNSR permitting program.[7]

B. Offset Requirements Applicable to SFW

In the SFW draft permit proposed on June 24, 2021, EPA proposed to require offsets for construction emissions. In doing so, EPA followed an approach it had applied in the first OCS permit EPA issued for a windfarm in 2011 and another one that EPA issued very recently.[8] The supporting record for those permits did not provide a robust explanation for why EPA required offsets from construction emissions in this context. For example, in EPA's fact sheet for the recent Vineyard Wind 1 permit, EPA stated that based on construction and operations emissions, "the … facility's potential emissions exceed the permit applicability threshold for … NNSR … requirements, including the requirement to offset NOx and VOC emissions."[9] In making these decisions, EPA's approach was to apply all NNSR requirements (LAER, offsets, siting analyses, and compliance of other sources), to all emissions from an OCS source, regardless of whether they resulted from construction or operation of the OCS source. In addition, during the public comment periods for these earlier permits, EPA did not receive comments on these OCS statutory and regulatory requirements and/or the application of offset requirements for OCS sources' construction emissions.

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[6] See EPA Letter to Dr. Robert L. Davies, Federal Energy Administration dated May 6, 1977. Available online at https://www.epa.gov/sites/default/files/2015-07/documents/emsnofst.pdf.

[7] The New Jersey Administrative Code at Title 7, Chapter 27 and Subchapter 18 states that: "Notwithstanding the provisions of [N.J.A.C. 7:27-18.3] (c) or (d)…, no person is required to secure emission offsets for temporary emission increases that occur during and result directly from the construction, reconstruction, or modification of the newly constructed, reconstructed, or modified equipment or control apparatus" (N.J.A.C. 7:27-18.3(h)).

[8] See EPA permits and supporting permit documents for Vineyard Wind 1 Offshore Windfarm (dated May 19, 2021) and Cape Wind Energy Project (dated June 2, 2011). Available online at https://www.epa.gov/caa-permitting/epa-issued-caa-permits-region-1.

[9] See page 14 of EPA's Fact Sheet for the Vineyard Wind 1 Offshore Windfarm. Available online at https://www.epa.gov/sites/default/files/2021-06/documents/vineyard-wind-1-llc-fs-sob.pdf.

Upon further review of the statutory and regulatory authority described above, we are now proposing in this supplemental notice to apply the offset requirements in the NNSR program on the OCS only to emissions associated with the operation of the OCS source addressed in this permit for SFW. EPA finds this approach consistent with how the NNSR program, and specifically the offset requirement, has been implemented by EPA and states per the CAA, EPA's implementing regulations, and the regulations in approved state NNSR programs, including Massachusetts, which is the COA for this action. We specifically request comment on our reading of CAA sections 173, 40 CFR Part 51 and the Massachusetts NNSR regulations to support the conclusion that offsets for construction emissions are not required, and that this understanding of these offset provisions should apply to OCS sources under section 328 of the CAA and 40 CFR Part 55 in the same manner as if such sources were located in the COA.

As we explained previously, the regulatory and statutory NNSR requirements focus on operating emissions and do not specifically require construction emissions to be offset. Therefore, we are revising the draft permit for SFW to modify the conditions regarding offsets and reopening the public comment period for the SFW permit action to seek comments on this proposed change and the supporting legal interpretation described above.

C. Offsets and Associated Permit Requirements in the Revised Draft Permit

During our first public comment period for this permit, the initial SFW fact sheet explained that "the project involves two distinct phases [construction phase and operational phase], each phase requiring a different offset type (i.e., emission reduction credit or "ERC")." However, upon further review of the statutory requirements in CAA Sections 173 and 328, and the 40 CFR part 55 OCS permitting implementing regulations, we are now requesting comment on an interpretation that would not require offsets for OCS sources' construction emissions.

Emissions during the construction phase for the project will end when construction and commissioning is completed and the operational phase begins as defined in the draft permit. As previously discussed, CAA Section 328 lists construction activities as activities that may be included in the definition of an OCS source. Therefore, construction emissions are included in the potential emissions for the project to determine the applicability of the NNSR permit program to the project. Because the potential emissions during any one-year period for SFW exceed the NNSR threshold for NOx, SFW is subject to the NNSR permit program. The estimated worst-case annual emissions due to construction of the South Fork Windfarm are shown in Table 1 below.

Table 1 - Worst Case Year Annual Emissions Estimates Compared with NNSR Thresholds

Pollutant	Estimated Worst Case Annual Emissions (tpy)	NNSR Threshold (tpy)	NNSR Triggered?
NOx	320.2	50	Yes
VOC	7.4	50	No

As discussed in Section VI.B. of EPA's June 24, 2021 Fact Sheet, the second phase of the project will involve emissions that are anticipated to occur every year the windfarm operates after the windfarm commences commercial operations. To offset operating emissions, the draft permit requires a continuous emission reduction credit (CERC), or simply an ERC, which is referred to as a rate-based ERC in 310 CMR 7.00, Appendix B. The unit used to define a rate-based ERC is tons per year, to recognize that the emission credit can offset yearly emissions that will occur each and every operating year of the source. The application of the NNSR offset requirements to operating emissions is consistent with the applicable statutes and permitting regulations, as well as the practice implemented by state and local NNSR programs. Therefore, EPA is not revising the draft permit with respect to the offset requirement for emissions associated with the operational phase of the project.

In the SFW draft permit, *Operational Phase* is defined as the period of normal operations that begins on the operational phase start date. The draft permit then defines *Operational Phase Start Date* as the date SFW identifies in its notice to BOEM, pursuant to 30 C.F.R. § 585.636, that the windfarm will commence commercial operations. The revised draft permit requires SFW to obtain offsets for operating emissions prior to the beginning of the operational phase.

Offsets for the operational phase of the project are subject to the adjustment factor of 1.2:1 required in 310 CMR 7.00, Appendix A, Section 6.e.1. Additionally, 310 CMR 7.00, Appendix B, Section 3.e.2 requires that persons seeking to use ERCs from the Massachusetts ERC bank must obtain an amount of credit equal to five percent more than the amount needed for the offset calculation, i.e., a 1.26:1 offset ratio. Based on the potential emissions of the project, the maximum offsets anticipated for the operational phase of the South Fork Wind project is contained in Table 2.

Table 2. Maximum NOx Offsets Needed for the Operational Phase of Project (assuming a 1.26:1 offset ratio)

Project Phase	NOx Emissions	NOx Offsets Needed	Units
Operation and Maintenance	19.2	25	tons per year

SFW can obtain rate-based offsets in the following manner:

- Purchasing ERCs identified in the Massachusetts ERC bank which have been created in accordance with 310 CMR 7.00, Appendix B. Appendix B allows companies to certify emission reductions by over-controlling their emissions, shutting down emission units or entire facilities, or taking enforceable restrictions on their operations that lead to emission reductions. 310 CMR 7.00, Appendix B was approved into the Massachusetts state implementation plan on August 8, 1996. *See* 61 FR 41355. Thus, ERCs in the Massachusetts ERC bank are federally enforceable;
- Enter into a third-party agreement that requires the third-party to lower its emissions. Such an agreement would need to be made federally enforceable prior to issuance of the final permit for SFW; or,
- From a facility that has ceased operations and had its CAA permits revoked or rescinded and has not had the resulting emissions reductions certified under the Massachusetts

trading bank regulations under 310 CMR 7.00, Appendix B. Offsets obtained in this manner must be memorialized in a document from the Commonwealth of Massachusetts to ensure that the offsets from such a shutdown are fully in compliance with the CAA and have not been relied on by Massachusetts to meet other CAA requirements. Once the offsets are used by a source pursuant to this option, the offsets would be retired and would no longer be available to be used by another company, or by the Commonwealth in meeting another CAA requirement.

NNSR offsets are required to be obtained from sources within the same nonattainment area or may be obtained from another area if two criteria are met. *See* 310 CMR 7.00, Appendix A(6)(b). Based on 2014 emission data from the EPA's National Emission Inventory database, total anthropogenic NOx emissions in Dukes County were 1,034 tons. Due to the lack of availability of potential NOx offsets (i.e., ERCs) within the Dukes County 2008 ozone nonattainment area, the EPA anticipates that SFW will obtain NNSR offsets using ERCs from another classified area. The two criteria that must be met when obtaining NNSR offsets from another classified area are:

1. The other area has an equal or higher nonattainment classification than the area in which the source is located; and
2. Where the proposed new source or modified source is located in a nonattainment area, emissions from such other area contribute to a violation of a national ambient air quality standard in the nonattainment area in which the proposed new or modified source would construct.

Areas within the OTR are required to meet the requirements of a moderate nonattainment area, regardless of whether the area is classified as marginal nonattainment or unclassifiable/attainment. Even though all areas within Massachusetts, outside of Dukes County, were designated unclassifiable/attainment for the 2008 ozone standard,[10] NNSR offsets from sources within Massachusetts meet the first criterion since all of the Commonwealth is required to meet the nonattainment requirements of a moderate nonattainment area.[11]

The second criterion requires a demonstration that emissions from the other area contributes to a violation of the ozone standard within Dukes County.[12] Based on recent air dispersion modeling that EPA conducted to assist states with their ozone transport analysis for the 2015 ozone NAAQS, sources within Massachusetts are projected to contribute 10.54 ppb ozone in Dukes County in 2023.[13]

Therefore, with both criteria met, the EPA is determining that SFW can obtain offsets from anywhere within Massachusetts. If SFW were to obtain offsets from another state, an analysis

[10] All of Massachusetts is designated attainment/unclassifiable for the 2015 ozone standard, a standard that is more stringent than the 2008 ozone standard. *See* 40 C.F.R. § 81.322.
[11] The EPA notes that 310 CMR 7.00, Appendix A requires new or modified sources of NO_x and VOC to meet the requirement of NNSR as if the source were being located in a serious nonattainment area.
[12] The EPA determined that Dukes County attained the 2008 ozone standard by the July 20, 2015 attainment date (*See* 81 FR 26697, May 4, 2016).
[13] *See* https://www.epa.gov/airmarkets/memo-and-supplemental-information-regarding-interstate-transport-sips-2015-ozone-naaqs, last visited on October 19, 2021. The 2015 NAAQS Interstate Transport Assessment Design Values and Contributions spreadsheet can be found in the docket.

similar to the one contained within this document for areas within Massachusetts would need to be performed and submitted to the EPA and concurred upon prior to relying on those offsets for compliance with offset obligations.

Almost all NOx emissions for purposes of determining the required NNSR offset totals are generated from third-party vessels. At the time of the revised draft permit, SFW and the EPA are not aware of the exact engines that are installed and will be operating on these third-party vessels. Without specific engine information, the methodology for determining daily NOx emissions is challenging – emissions tracking is needed to capture the total emissions from any of the vessels that may be used at any time. Therefore, EPA has determined that daily NOx emissions tracking is necessary for demonstrating compliance with the requirement for SFW to obtain sufficient NNSR offsets for the operation phase of the project. The revised draft permit maintains the requirement for SFW to obtain 25 tons per year of CERCs for the operational phase of the project. EPA has modified the recordkeeping requirements in Section VIII and reporting requirements in Section IX of the revised draft permit to ensure the NOx emissions for the operational phase of the project are in compliance with the offset requirements in the permit. (*See* Section IX of EPA's June 24, 2021 initial Fact Sheet for a summary of the basis for the remaining monitoring, reporting, and recordkeeping provisions that were not modified in the revised draft permit.)

The EPA acknowledges that the methodology in the revised draft permit for calculating daily NOx emissions for the operational phase of the project is conservative and potentially overestimates daily emissions of each pollutant. The revised draft permit's proposed methodology for determining daily NOx emissions involves the following records and measurements:

1. Requiring SFW to document the Tier standard the engine's manufacturer certified each engine to meet. Knowing the Tier standard the engine is certified to meet allows the Permittee and the EPA to determine the emission factor of a given pollutant in g/kW-hr that the engine will emit while operating;

2. Nameplate information for each engine. This data at a minimum should include the engine's manufacturing date, rated maximum power, the number of cylinders, and the overall engine displacement;

3. Record whether the engines are on a foreign or domestically flagged vessel;

4. Hours of operation when operating within 25 nautical miles of the OCS source; and

5. When using the alternative method for an engine's load factor that relies on actual fuel used while operating within 25 nautical miles of the OCS source, SFW must obtain and keep a record of the manufacturer's performance specification data for each engine that is used to calculate engine load based on fuel usage.

Even with the above information, further assumptions must be made when determining daily NOx emissions. These assumptions are:

1. Emission factors for some Tier certified engines combine NOx and VOC into one emission limit. When this is presented, the EPA has calculated a NOx/VOC ratio based on the total potential NOx and VOC emissions for the OCS source to determine g/kW-hr for NOx.

2. Some engines on vessels may not be certified to either an IMO or EPA standard. In this case, the EPA is relying on emission data from EPA's Draft Regulatory Impact Analysis: Control of Emissions from Compression-Ignition Marine Engines, dated November 1998, for determining NOx emission factors.[14]

3. If fuel usage data and manufacturer's performance specification data is unavailable, SFW will use a default value of 0.69 as the engine's load factor. This number is based on the weighted average engine load when a manufacturer certified an engine meets EPA's Tier emission limits. *See* 40 C.F.R. §94.105(b), Table B and 40 C.F.R. part 1042, Appendix II, section (a)(1).

In addition, EPA has revised additional recordkeeping requirements to ensure compliance with provisions that apply during the construction phase of the project when certain activities meet the definition of an OCS source and are subject conditions in the permit. These recordkeeping provisions are necessary to determine compliance with applicable permit conditions such as engine regulations and BACT/LAER provisions.

V. Comment Period, Hearings and Procedures for Final Decisions

EPA received comments on the initial draft permit that was available for public comment from June 24 – August 9, 2021. The EPA is not responding to those comments in this action, but will consider those comments when making a final permit decision on the revised draft permit.

All persons, including applicants, who believe any condition of the revised Draft Permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, in writing. Due to the COVID-19 emergency, EPA prefers that all comments be submitted by electronic means to:

Undine Kipka
kipka.undine@epa.gov

If email submittal of comments is not feasible, hard copy comments may be submitted to the address below.

Undine Kipka
Air and Radiation Division (Mail code: 05-2)
U.S. EPA Region 1
5 Post Office Square, Suite 100
Boston, MA 02109

[14] *See* https://nepis.epa.gov/Exe/ZyPDF.cgi/P1004N1J.PDF?Dockey=P1004N1J.PDF, last visited on October 19, 2021 and included in the docket.

Comments may also be submitted electronically through https://www.regulations.gov (Docket ID #**EPA-R01-OAR-2021-0392**).

A public hearing will be held during the public comment period. See the public notice for details. The EPA will consider requests for extending the public comment period for good cause. In reaching a final decision on the Draft Permit, the EPA will respond to all significant comments and make these responses available upon request.

Following the close of the public comment period, and after the public hearing, the EPA will issue a Final Permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within 30 days following the notice of issuance of the final permit decision, any eligible parties may submit a petition for review of the final permit decision to the EPA's Environmental Appeals Board consistent with 40 C.F.R. § 124.19.

VI. EPA Contacts

Additional information concerning the draft permit may be obtained from:

Undine Kipka
Telephone: (617) 918-1335
Email: kipka.undine@epa.gov

All supporting information regarding this permitting action can also be found on EPA's website at https://www.epa.gov/caa-permitting/epa-issued-caa-permits-region-1 or at www.regulations.gov Docket ID #**EPA-R01-OAR-2021-0392**.