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fact sheet

Moderna Therapeutics, Inc. • 1 Moderna Way Norwood *Non-Major Comprehensive Plan Application No. 24-AQ02F-0001-APP*

Introduction

The Massachusetts Department of Environmental Protection ("MassDEP" or the "Department") regulates emissions to air from various sources, such as industrial facilities, power plants, and other operations, through the issuance of permits and approvals. These permits outline specific limits and requirements for emissions of certain emissions. The purpose of these permits is to ensure facilities operate in compliance with state and federal air quality regulations, protecting public health, safety or the environment. MassDEP evaluates permit applications, sets emission limits based on factors like air quality standards and technological feasibility, and may require facilities to implement pollution control measures or monitoring systems. Facilities must apply for and obtain an air permit or approval before constructing or modifying operations that could potentially emit air pollutants. Compliance with the conditions outlined in the permit is essential to avoid enforcement actions and potential penalties from MassDEP. Regular inspections as well as testing and monitoring may also be conducted to verify compliance with requirements.

Moderna Therapeutics, Inc. has filed an Air Quality Permit Application, non-major comprehensive plan application (nmCPA - No. 24-AQ02F-0001-APP - "the application") with the MassDEP for the operation of three diesel-fired emergency generators sets installed in 1999, each with a maximum electrical power output of 1,000 kilowatts (1,000 kWe). When necessary, the generators provide backup electrical power to the facility, located at 1 Moderna Way, Norwood, Massachusetts.

The proposed operation is subject to the Massachusetts Air Pollution Control Regulations (310 CMR 7.00). Prior to commencing construction, the facility operator is required to apply for and obtain a permit, known as an "Approval." Currently, MassDEP is in the process of reviewing the application. Upon completion of the review, MassDEP will issue a proposed decision, either approving or denying the application. Subsequently, a 30-day public comment period will be provided on the proposed decision. Information regarding how to review the application, receive notification of MassDEP's proposed decision, and submit comments can be found in the "*How to Comment*" section of this Fact Sheet.

Facility Information

Moderna Therapeutics, Inc. is a clinical and commercial pharmaceutical manufacturing facility that produces a range of messenger ribonucleic acid (“mRNA”) based biopharmaceuticals and vaccines. The facility operates various pharmaceutical production processes and equipment. The Moderna Norwood campus is made up of three main buildings (Buildings #100, 200 & 400) which house all manufacturing, research and development, along with other smaller office buildings.

The facility operates a total of thirteen (13) natural-gas boilers, ten (10) diesel-fired engines, one (1) natural gas-fired engine, six (6) steam-humidification generators, four (4) humidifiers, twenty-three (23) rooftop-heating units, and six (6) hot-water heaters, all of which generate criteria pollutant and Hazardous Air Pollutants (“HAP”) emissions. All fuel-burning equipment at the facility operates under Restricted Emission Status Final Approval No. AQ09-0000005, which limits potential emissions of nitrogen oxides to below the major source threshold (50 tons per year).

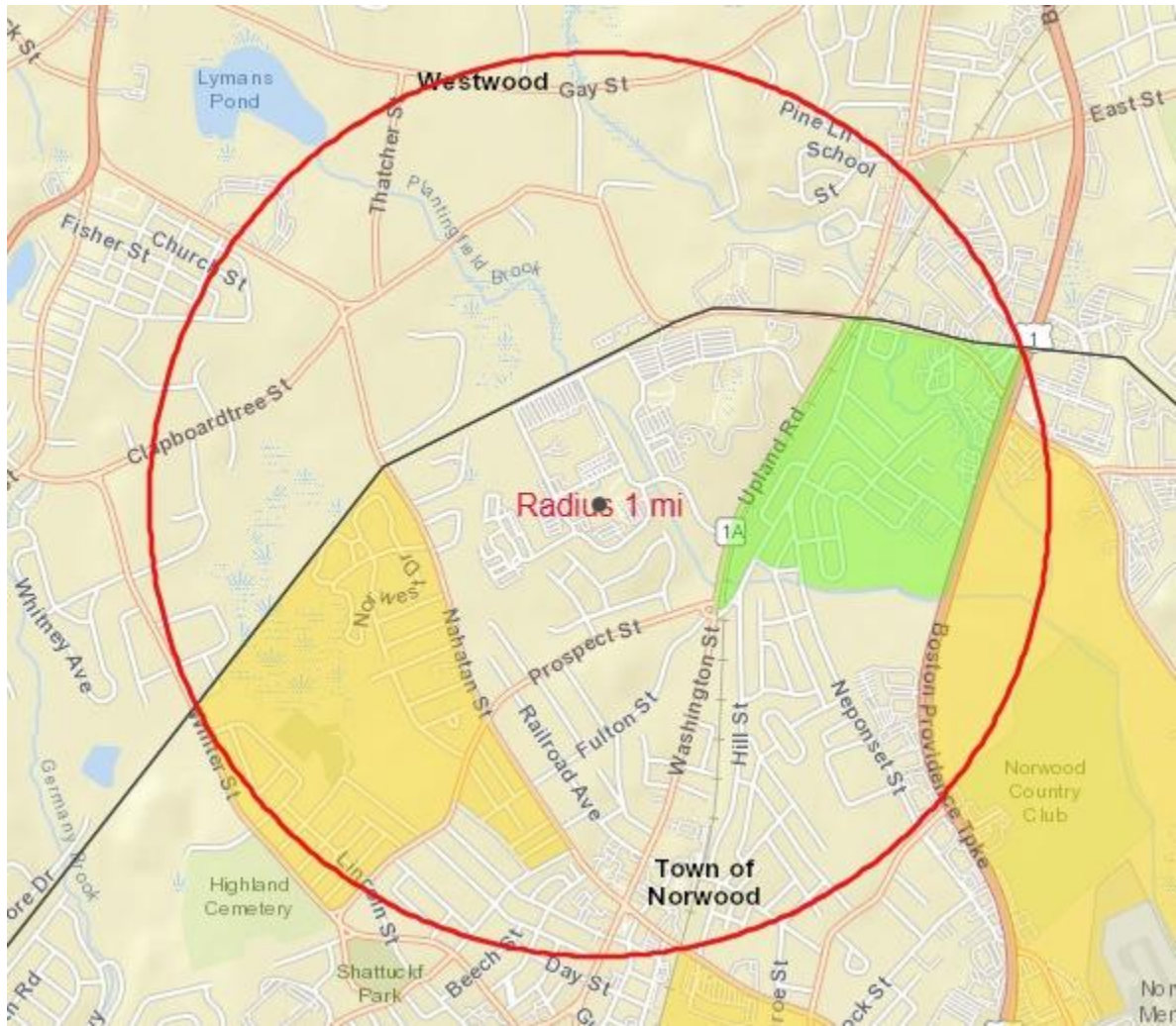
The pharmaceutical manufacturing processes inside the facility will additionally generate volatile organic compound (“VOC”) and HAP emissions. The facility is a minor source of all criteria air pollutants, and a (minor) source of HAP.

Environmental Justice

Environmental Justice (“EJ”) centers around the belief that everyone deserves protection from pollution and the opportunity to thrive in a clean, healthy environment. It embodies the idea of fair treatment and meaningful participation for all individuals regarding the creation, execution, and enforcement of environmental regulations, as well as the fair allocation of environmental advantages. MassDEP employs United States census data to pinpoint census block groups designated as environmental justice areas, using criteria such as income, minority population percentage, and language accessibility. MassDEP is dedicated to ensuring that inhabitants of EJ areas have the opportunity for meaningful engagement in MassDEP activities within their community. For more information on MassDEP’s EJ program please visit <https://www.mass.gov/environmental-justice> or you can also contact Debbie Marshall-Hewlitt, MassDEP’s Southeast Regional Office Environmental Justice Coordinator at Deborah.marshall-hewlitt@mass.gov, (774) 384-3564.

MassDEP is required to look at the population within a one-mile radius of facilities submitting non-major comprehensive plan applications. Moderna Therapeutics, Inc. is surrounded by the following EJ designated areas: Block Group 1, Census Tract 4133 by the criteria Minority; Block Group 7, Census Tract 4131 by the criteria Minority; Block Group 1, Census Tract 4132.01 by the criteria Income. The one-mile radius does extend into the town of Westwood; however, the radius does not include EJ areas in that community. This data was obtained from the EEA EJ Map Viewer Tool at <https://www.mass.gov/info-details/massgis-data-2020-us-census-environmental-justice-populations>.

Within one mile of the facility there are identified census tracts where at least 5% of the population has Portuguese and Spanish speakers in the homes of public school students, who reported they speak a language other than English. Accordingly, this EJ Fact Sheet and forthcoming Notice of Public Comment period will be translated into Portuguese and Spanish and circulated within the community.



- Minority: the block group minority population is $\geq 40\%$, or the block group minority population is $\geq 25\%$ and the median household income of the municipality the block group is in is $< 150\%$ of the Massachusetts median household income
- Income: at least 25% of households have a median household income 65% or less than the state median household income

Project Information

The application proposes the operation of three (3) existing generator sets that provide electric power to the facility during emergency situations. The generators are each 1,341 brake-horsepower (bhp) diesel-fired Caterpillar Model 3508B generators sets with a maximum electrical power output of 1,000 kW_e.

The generators sets were each installed at the facility in 1999. In 2024, Moderna Therapeutics self-disclosed to MassDEP that these units are subject to air quality plan approval requirements due to the maximum fuel firing rate of each engine exceeding permitting thresholds.

The applicant proposes to limit the operation of each generator to no more than 229 hours of emergency operation per consecutive 12-month period, with up to 50 of those hours allowed for non-emergency use.

Exhaust emissions from each generator set will be vented via 36.6-foot-high stacks as measured from ground level. To reduce noise pollution, each generator set will be located within an enclosure and equipped with a Riley Model M51 sound silencer.

The combined potential emissions of criteria pollutants and HAPs from the three generators is totaled below.

Combined Three (3) Caterpillar 3508B Emergency Generator Sets Potential Emissions (tons per consecutive 12-month period)					
Nitrogen Oxides	Carbon Monoxide	Sulfur Dioxide	Particulate Matter	VOCs	HAP
4.18	0.315	0.00559	0.173	0.315	0.0152

How to Comment

MassDEP is currently reviewing Application No. 24-AQ02F-0001-APP. The permit application is currently available for public review via the EEA ePLACE Public Access Portal:

<https://eeaonline.eea.state.ma.us/EEA/PublicApp/>

On the main EEA ePLACE Portal page, click on the orange “Search and/or Comment” button, then on the name of the applicant/facility on the resulting page.

After MassDEP completes its review of the permit application, the agency will issue a proposed decision, subject to a 30-day public comment period. This information will also be posted in the ePLACE Public Access Portal.

Contact Information

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