



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Northeast Regional Office • 150 Presidential Way Woburn, MA 01801 • 978-694-3200

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

April 8, 2025

Mr. James L. Fletcher
W.J. Graves Construction Co.
192 Depot Road
East Templeton, MA 01438

RE: WESTFORD
ePlace Authorization #: AQ02P-0000082
Application #:24-AQ02P-0008-APP
Approval #: NE-24-008
Class: SM-25
SMS/FMF No.: 319383
FINAL AIR QUALITY PLAN APPROVAL

Dear Mr. Fletcher,

The Massachusetts Department of Environmental Protection (“MassDEP”), Bureau of Air and Waste, has reviewed your Non-major Comprehensive Plan Application (“Application”) listed above. This Application concerns the operation of aggregate crushing equipment at your aggregate crushing plant located at 80 Ledge Road, Westford, Massachusetts (“Facility”). The Application bears the seal and signature of David Alan Chappell, Massachusetts Registered Professional Engineer Number 34706.

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 “Air Pollution Control” regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-O, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP’s review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator (“Permittee”) must comply in order for the Facility to be operated in compliance with this Plan Approval.

On April 3, 2025, public notice was published on the MassDEP website for public review and comment on the proposed Non-Major Plan Approval (ePlace Application number: 24-AQ02P-0008-APP) for your Facility located at 80 Ledge Road, Westford, MA. The comment period ended April 4, 2025. No comments were submitted.

1. DESCRIPTION OF FACILITY AND APPLICATION

A. FACILITY DESCRIPTION

W.J. Graves Construction Co., located at 80 Ledge Road, Westford, Massachusetts, is an existing quarry and crushing plant that has been in operation since 2007. Operations at the Facility include the production and storage of crushed stone, gravel and/or aggregate for use of concrete production or general sale of materials. The Facility is situated on the border of Chelmsford and Westford. The principal location of the Facility and all quarry operations occur exclusively in Westford, Massachusetts, while Ledge Road, the only entry or egress to the Facility, is located in Chelmsford, Massachusetts.

B. HISTORY

On April 2, 2024, W.J. Graves Construction Co., Inc. and MassDEP entered into an Administrative Consent Order with Penalty and Notice of Noncompliance (Enforcement Document Number 00017593) for violations of 310 CMR 7.01, 7.09(1), and 7.09(4), creating a condition of air pollution and dust. The enforcement document required W.J. Graves Construction Co., Inc. to submit a non-major Comprehensive Plan Application (“nmCPA”) for the Facility within ninety (90) days of the Consent Order. This requirement was fulfilled when W.J. Graves Construction Co., Inc filed Application 24-AQ02P-0008-APP with MassDEP.

C. PROJECT DESCRIPTION

The purpose of this Application is to permit the existing aggregate crushing plant at the Facility that has been in operation since 2007. The crushing plant, designated as EU1, includes various rock crushers, screens, belt conveyors, feeders, and bins. EU1 produces crushed stone, gravel, and sand of various sizes. Following the issuance of the Administrative Consent Order described above, upgrades to the wet dust suppression systems on the crushing plant have been made, with water nozzles located at the feeder, crusher inlets, on each crusher discharge, and belt conveyors. The various plant components of EU1 have been organized in a configuration suitable for the reduction of material size and for progressive removal of various sized products. The process chain for rock crushing is described below.

Rock is hauled by trucks from the quarry working levels to EU1. Rock is initially loaded by heavy equipment into the primary jaw crusher, where it is processed and then discharged by a belt conveyor. The primary crusher is a Metso LT130 jaw crusher or equivalent, which is set at a closed side setting (CSS) of 6-inches. At this setting, the maximum capacity of the jaw crusher is approximately 761 tons per hour (TPH). Spray nozzles, equipped with a high pressure water

pump, and a shrouding cover have been added to the jaw crusher to control fugitive dust emissions.

The material from the primary crusher is then transferred by an enclosed belt conveyer with wet dust suppression to the first screening plant in the operation. The McCloskey 6x20 screening plant or equivalent processes and transports material through a series of under screen and cross conveyers, where it is eventually separated into three (3) different sizes. The processed material from this stage, 1.5-inch stone and 0.75-inch pack are separated and transferred by belt conveyers from the screening plant, and they are then stockpiled separately. The rock which is not separated is transferred from the screening plant by belt conveyer, where it is loaded into the first cone crusher. The first cone crusher is a McCloskey cone crusher with a TelSmith 52-inch cone or equivalent, recently equipped with six (6) additional spray nozzles to control fugitive dust emissions.

Rock processed by the initial cone crusher is transferred via discharge conveyer to the secondary screening plant setup. The secondary screen operation is a Terex/Finlay 694+ 5x20 screen plant or equivalent. This plant processes and transports the remaining rock material through a series of screens and belt conveyers, eventually separating it into four different sizes. A series of three discharge conveyers separately transfer material, sized 0.75-inch stone, 1.5-inch stone, and 0.5-inch aggregate, away from the screening plant and into stockpiles. Stone that is not piled separately continues through the crushing operation.

After the material leaves the secondary screen setup, it is transported by belt conveyer to the secondary cone crusher. The cone crusher is a McCloskey cone crusher with a TelSmith 44-inch cone or equivalent, equipped with wet dust suppression. Processed rock is discharged from the cone crusher and transferred by belt conveyer to the third screening plant setup. The screening plant is a Terex/Finlay 694+ 5x20 screen plant or equivalent. This plant processes and transports the remaining rock material through another series of screens and belt conveyers, eventually separating it into three sizes. A series of three discharge conveyers separately transfer the processed material, sized 0.75-inch stone, 0.375-inch stone, and fines, away from the screen plant and into various stockpiles.

Fugitive dust emissions from various Facility operations not pertaining to crushing, including aggregate stock piling, and transportation of material via paved and unpaved roads, are controlled via best management practices proposed within the Facility's Particulate Matter (PM) Control Plan, including but not limited to wetting aggregate stockpiles and restrictions on where stock piling may occur, wet sweeping paved roads, and speed limits, watering, and calcifying on unpaved roads.

The only pollutant emitted from Facility operations, via EU1 and all fugitive emissions, is particulate matter (PM). The annual emissions of PM are calculated from emission factors contained in Federal Standard AP-42, Section 11.19.2, and are based on an annual production of 600,000 tons per year (TPY) of aggregate material. The production and emission limits for EU1 are contained in Table 2 below.

D. REGULATORY REQUIREMENTS

1. State Requirements

Best Available Control Technology (BACT)

The Permittee's emissions of PM from equipment processes are subject to BACT review pursuant to 310 CMR 7.02(8)(a)(2). The Permittee proposed a level of control based on best management practices and pollution control devices, including but not limited to wet dust suppression sprays, shrouding around crusher discharges, and conveyor belt covers, that minimizes emissions to the extent feasible. MassDEP has determined that meeting the requirements as stated in this Plan Approval for the equipment and subsequent operation of the referenced emission units in Table 1 represents BACT.

Environmental Justice

In accordance with the Massachusetts Executive Office of Energy & Environmental Affairs' Environmental Justice (EJ) Policy (updated June 24, 2021), MassDEP has established an inclusive and robust public participation program for key agency actions that potentially affect EJ populations. MassDEP's EJ public involvement efforts include enhanced outreach to designated EJ populations when a Non-Major Comprehensive Plan Application is located in a designated EJ population or within 1 mile of a designated EJ population. This Facility is located within a Minority population tract. The applicant prepared an EJ Factsheet, which MassDEP made publicly available and distributed to local interest groups during the application review period.

2. Federal Requirements

The Permittee has indicated that the Project is subject to 40 CFR 60 Subpart OOO– Standards of Performance for Nonmetallic Mineral Processing Plants. Since MassDEP has not accepted delegation for Subpart OOO for sources which are not subject to 310 CMR Appendix C, the Permittee is advised to consult with EPA Region 1 at 5 Post Office Square, Suite 100, Boston, MA 02109-3912, telephone: (617) 918-1111. Other applicable requirements may include notification, record keeping, and reporting requirements.

2. EMISSION UNIT IDENTIFICATION

Each Emission Unit (“EU”) identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1

EU	Description	Design Capacity	Pollution Control Device(s)
EU1	Aggregate Crushing Plant	761 TPH ¹	<ul style="list-style-type: none"> • Wet suppression system • Shrouding • Belt Covers • PM/Dust Control Plan

Table 1 Key:

EU = Emission Unit

TPH = tons per hour

PM = Particulate Matter

Table 1 Notes:

1. Maximum capacity of the Metso LT130 jaw crusher at a closed side setting (CSS) of 6-inches.

3. APPLICABLE REQUIREMENTS

A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2:

Table 2

EU	Operational / Production Limit	Air Contaminant	Emission Limit
EU1	1. Process no more than 75,000 tons per month of stone or aggregate material 2. Process no more than 600,000 tons per consecutive twelve-month period of stone or aggregate material	PM _{2.5}	0.02 TPM 0.2 TPY
		PM ₁₀	0.17 TPM 1.33 TPY
		PM	0.45 TPM 3.6 TPY
		Opacity ^{1,2}	12% for crushers 7% for conveyor transfer points and screening operations
Facility-Wide	N/A	Opacity ^{1,2}	10% for unpaved and paved roads within the Facility

Table 2 Key:

EU = Emission Unit

PM₁₀ = Particulate Matter less than or equal to 10 microns in diameter

TPM = tons per month

% = Percent

PM_{2.5} = Particulate Matter less than or equal to 2.5 microns in diameter

PM = Total Particulate Matter

TPY = tons per year

Table 2 Notes:

1. Visible dust emissions on site shall be kept at or below the opacity specified herein during all modes of operation, including startups and shutdowns.
2. When determining compliance with the fugitive opacity emissions, the Facility personnel shall use EPA Method 9 based on average of five 6-minute averages as specified in 40 CFR Part 60.675(c)(3).

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5:

Table 3

EU	Monitoring and Testing Requirements
EU1	1. The Permittee shall monitor the production of crushed stone in tons on a monthly and consecutive twelve-month basis.
	2. The Permittee shall, during daily startup of the plant operations, conduct a visual inspection of each Pollution Control Device, including but not limited to the wet dust suppression system, shrouding, and belt covers, and shall note any deficiencies and/or malfunctions and take immediate corrective actions. All such daily inspections shall be conducted in conformance with the Facility’s Particulate Matter (PM) Control Plan.
	3. The Permittee shall monitor the fugitive emissions from the crushers, the conveyor transfer, and screening operations during all modes of operation including startups and shutdowns. If the fugitive emissions are deemed excessive using USEPA 40 CFR 60, Appendix A, Method 22 – visual determination of fugitive emissions, then the Facility personnel shall halt the applicable rock crushing and processing operations as quickly as practicable and take correction action(s) such as to repair the wet suppression system before returning the rock crushing and processing operations back to service.
Facility-wide	4. The Permittee shall allow Department personnel access to the plant site during normal business hours and access to all pertinent records for the purpose of making inspections.
	5. The Permittee shall immediately correct and abate any excessive visible dust emissions that occur from the stone crushers, vehicular site traffic, public roadway, or any other portion of the Facility during Facility operations.
	6. The Permittee shall monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration and 310 CMR 7.71 Greenhouse Gas Reporting, as applicable.
	7. If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and Regulation 310 CMR 7.13.
	8. The Permittee shall monitor all operations to ensure compliance with the requirements contained in Table 2.

Table 3 Key:

EU = Emission Unit

MassDEP = Massachusetts Department of Environmental Protection

CMR = Code of Massachusetts Regulations

USEPA = United States Environmental Protection Agency

Table 4

EU	Record Keeping Requirements
EU1	1. The Permittee shall, at a minimum, record the daily inspections of all the wet suppression systems. All such daily inspections shall be conducted in conformance with the Facility’s Particulate Matter (PM) Control Plan.
Facility-wide	2. The Permittee shall maintain the following records for a period of five (5) years. <ol style="list-style-type: none"> a. Date and hours of operation of the stone crushing operations; b. Total production from the crushing plant, in tons per month; c. All routine or emergency maintenance performed on the water spray system; d. Records of nozzle and filter cleaning replacement; and e. Daily visual observations at the crushing plant and the Facility grounds.
	3. The Permittee shall maintain adequate records on-site to demonstrate compliance status with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve-month period (current month plus prior eleven months). These records shall be compiled no later than the 15 th day following each month. An electronic version of a MassDEP approved record keeping form, in Microsoft Excel format, may be downloaded at https://www.mass.gov/guides/massdep-facility-wide-emission-restrictions-caps-reporting#WorkbookforReportingOn-SiteRecordKeeping .
	4. The Permittee shall maintain records of monitoring and testing as required by Table 3.
	5. The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMP and Particulate Matter (PM) Control Plan for the EU(s) and PCD(s) approved herein on-site.
	6. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s), PCD(s) and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.
	7. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s), PCD(s) and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.
	8. The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration and 310 CMR 7.71 Greenhouse Gas Reporting, as applicable.
	9. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.
	10. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

Table 4 Key:

EU = Emission Unit

PCD = Pollution Control Device

SOMP = Standard Operating and Maintenance Procedure

MassDEP = Massachusetts Department of Environmental Protection

USEPA = United States Environmental Protection Agency

Table 5

EU	Reporting Requirements
Facility-wide	1. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a “Responsible Official” as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).
	2. At least 30 days prior to emission testing, the Permittee shall submit to MassDEP for written approval an emission pretest protocol.
	3. Within 60 days after emission testing, the Permittee shall submit to MassDEP a final emission test results report.
	4. The Permittee shall notify the Northeast Regional Office of MassDEP, BAW Permit Chief by telephone: 978-694-3200 or email at nero.air@mass.gov , as soon as possible, but no later than three (3) business day after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted via MassDEP’s Compliance Reporting System (https://eeaonline.eea.state.ma.us/EEA/ComplianceReport/) under Exceedance Report (EXCDNC), within ten (10) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).
	5. The Permittee shall report every three years to MassDEP, in accordance with 310 CMR 7.12, all information as required by the Source Registration/Emission Statement Form.
	6. The Permittee shall report annually to MassDEP, in accordance with 310 CMR 7.71, all required greenhouse gas emissions, as applicable.

Table 5 Key:

EU = Emission Unit
 MassDEP = Massachusetts Department of Environmental Protection
 BAW = Bureau of Air and Waste

CMR = Code of Massachusetts Regulations
 USEPA = United States Environmental Protection Agency

4. SPECIAL TERMS AND CONDITIONS

A. The Permittee is subject to, and shall comply with, the Special Terms and Conditions as contained in Table 6 below:

Table 6

EU	Special Terms and Conditions
EU1	1. The Permittee shall activate the wet dust suppression system prior to the startup of the stone crushers and support equipment.
Facility-wide	2. The Permittee shall maintain aggregate storage piles and Facility roadways so as to minimize dust conditions in accordance with the Facility's Particulate Matter (PM) Control Plan.

Table 6 Key:

EU = Emission Unit

Table 7

EU	Stack Height Above Ground (feet)	Stack Inside Exit Dimensions (Inches)	Nominal Stack Gas Exit Velocity Range (feet per second)	Nominal Stack Gas Exit Temperature Range (°F)
EU1 ¹	N/A	N/A	N/A	N/A

Table 7 Key:

EU = Emission Unit

°F = Degree Fahrenheit

N/A = Not Applicable

Table 7 Notes:

1. There is no stack associated with EU1.

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

- A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).
- B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.
- C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.
- D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.
- E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local laws or regulations now or in the future.
- F. The Application is incorporated into this Plan Approval by reference. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
- G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
- H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
- I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.
- J. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions

contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain “Fail-Safe Provisions,” which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL OF DECISION

This Decision is an action of MassDEP. If you are the applicant, an aggrieved person who has submitted written comments, where applicable, or a ten persons group that has submitted written comments, where applicable, you may request an adjudicatory hearing in accordance with 310 CMR 7.51(1). A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Decision.

Under 310 CMR 1.01(6)(b), the request for adjudicatory hearing must state clearly and concisely the facts which are the grounds for the request, and the relief sought. Additionally, the request must state why the Decision is not consistent with applicable laws and regulations. In the request, an aggrieved person must state with specificity the basis of his or her claim of aggrievement. A ten persons group that files a request for an adjudicatory hearing must include affidavits from each person of the group stating their intent to be a part of the group and to be represented by the group’s authorized representative. The request must comply with all other requirements of 310 CMR 1.01.

The issues raised in the request for adjudicatory hearing are limited to the subject matter of this Decision and are limited further to the issues raised during the public comment period. If the issue was not raised during the public comment period, the issue may be raised upon showing that it was not reasonably possible with due diligence to have raised such matter during the public comment period or for good cause shown.

The hearing request along with a valid check payable to Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) and a completed Adjudicatory Hearing Fee Transmittal Form found at <https://www.mass.gov/doc/adjudicatory-hearing-fee-transmittal-form/download> must be mailed to:

Commonwealth of Massachusetts

Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

An aggrieved person or a ten persons group shall send a copy of the request for an adjudicatory hearing by first class mail to the Applicant and MassDEP's contact person listed in the Decision.

The request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below.

The filing fee is not required if the appellant is a city or town (or municipal agency), county, district of the Commonwealth of Massachusetts, the Massachusetts Bay Transportation Authority, federally recognized Indian tribe housing authority, effective January 14, 1994, or a municipal housing authority. MassDEP may waive the adjudicatory hearing filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, a request for the waiver of the fee and an affidavit setting forth the facts believed to support the claim of undue financial hardship as specified in 310 CMR 4.06(2).

Should you have any questions concerning this Plan Approval, please contact Mollye K. Malone by telephone at (978) 604-3268, or in writing at the letterhead address.

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

Mollye K. Malone
Environmental Engineer

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

Edward J. Braczyk
Permit Chief
Bureau of Air and Waste

ecc: Westford Health Department – Rae Dick
Chelmsford Health Department – Donna Greenwood
Westford Fire Department - Joseph Targ
Jen Melanson, Community Services Coordinator for the Town of Chelmsford, jmelanson@chelmsfordma.gov
Gerry Hall, Point Man for Citizens Petition for the Town of Chelmsford, gerrythall@comcast.net
MassDEP - Yi Tian, John Macauley
Chappell Engineering - David Chappell
Chappell Engineering - Chris Gibbons