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POLICY DIRECTIVE

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HIGHWAY ADMINISTRATOR

GUIDANCE REGARDING THE 700 CMR 19.00 AGGREGATE SOURCE LICENSING FOR THE PRODUCTION OF CEMENT CONCRETE

Background

On October 17, 2023, Governor Healey signed into law chapter 56 of the acts of 2023, *An Act Relative to Requiring the Highway Division of the Massachusetts Department of Transportation to Establish a Department and Licensure Process to Oversee Quarries Producing Concrete Aggregate*.

The law established MGL c. 6C, § 79 and its provisions are designed to mitigate the risk of crumbling concrete in residential foundations as a result of oxidizing pyrrhotite or framboidal pyrite in concrete mix. To accomplish this, the law required MassDOT to promulgate regulations to establish a license program for concrete aggregate manufacturers. In relevant part, the law requires that a license application include testing of concrete aggregate materials, “a description of the geographic location of the aggregate source” and a Geological Source Report (“GSR”) signed by a “certified professional geologist”. The law requires that the GSR include, in relevant part, “a description of the characteristics of the aggregate to be excavated at the aggregate source location.”

On September 12, 2025, MassDOT fulfilled its statutory mandate and promulgated the regulations at 700 CMR 19.00: Aggregate Source Licensing for the Production of Cement Concrete (the “Regulations”). The Regulations establish a licensing program, including testing and GSR requirements.

Purpose

This policy provides additional clarification for fulfilling requirements of the Regulations, specifically with respect to types of aggregate manufacturers, testing requirements for each, and fulfilling the Site Geology requirements in the GSR and license application. Capitalized terms not defined herein shall have the meaning set forth in 700 CMR 19.02.

Aggregate Manufacturers

Aggregate Manufacturers, as defined in the Regulations, shall be aggregate processing facilities subject to regulation by the Mine Safety and Health Administration (MSHA).

Aggregate Manufacturers shall include both an “On-Site Aggregate Source” and “Off-Site Aggregate Source”, as each is defined herein:

On-site Aggregate Source: An on-site extraction area, where aggregate is obtained at the MSHA certified Aggregate Manufacturer’s processing facility.

Off-site Aggregate Source: Aggregate obtained from multiple off-site areas and blended into a single product, at the MSHA certified Manufacturer’s processing facility, and is considered part of a single aggregate source.

Sampling, Testing and Examination for Total Sulfur, Pyrrhotite and Framboidal Pyrite

For purposes of 700 CMR 19.05(a), on-site aggregate sources shall be sampled for testing and examination from the processed stockpile(s) extracted at their aggregate source site. The geology of the aggregate stockpile samples shall be of the same geology identified in the Geological Source Report (GSR).

For purposes of 700 CMR 19.05(a), off-site aggregate sources shall be sampled from each off-site extraction site prior to processing, in accordance with the recommendations of the certified professional geologist, licensed professional geologist or an equivalent acceptable to the State Geologist. Aggregate obtained from each off-site extraction area shall be tested and examined individually prior to processing, in accordance with 700 CMR 19.05(2)(b). Additionally, pursuant to 700 CMR 19.09(6) at a minimum frequency of once (1) per month, off-site aggregate source shall sample for testing and examination from the facility’s processed stockpile(s) in accordance with the same sampling requirements as on-site aggregate. Testing results must be submitted to MassDOT prior to the sale of the aggregate to a concrete producer.

Irrespective of whether a Concrete Aggregate Manufacturer is an on-site aggregate source or an off-site aggregate source, all testing shall be in accordance with 700 CMR 19.05(b), with level 1 testing for total sulfur content and conducting level 2 petrographic testing for pyrrhotite and framboidal pyrite if level 1 testing reveals sulfur content at or above the regulatory limit.

Geological Source Report (GSR)

For purposes of 700 CMR 19.06, an applicant for a license under 700 CMR 19.00 shall submit a GSR for each aggregate source with their application(s).

For purposes of 700 CMR 19.06, an applicant submitting for a blended off-site aggregate source may submit a single GSR, with the Aggregate Manufacturer’s processing facility MSHA identification number, that reports each existing, known, or planned off-site extraction area, in accordance with 700 CMR 19.06. Subject to Department and state geologist review and approval, an applicant submitting for a blended off-site aggregate source may, in lieu of the site

geology requirements of 700 CMR 19.06(2)(b), obtain confirmation signed by a Licensed Professional Geologist or an equivalent acceptable to the State Geologist, that there is a statistically insignificant risk that the off-site extraction area(s) for a given year contain iron sulfide deposits (pyrrhotite and framboidal pyrite), subject to additional testing requirements for off-site aggregate sources described in 700 CMR 19.05, as clarified in this guidance. In the event that an Aggregate Manufacturer obtains Aggregate from an off-site aggregate source not identified in the GSR, the Aggregate Manufacturer must submit to the department (i) an addendum to the GSR describing the site geology for that extraction site or (ii) confirmation signed by a Licensed Professional Geologist or an equivalent acceptable to the State Geologist, that there is a statistically insignificant risk that the off-site extraction area contains iron sulfide deposits (pyrrhotite and framboidal pyrite), subject to additional testing requirements for off-site aggregate sources described in 700 CMR 19.05, as clarified in this guidance.

For purposes of 700 CMR 19.06(1), the required contents for the GSR cover page may be reported on multiple pages.

For purposes of 700 CMR 19.06(2)(b)(5), the GSR shall report logs of subsurface explorations, rock cores, exposed quarry faces, or sampled material data, as applicable.

For purposes of 700 CMR 19.06(2)(b)(17), a caption for each submitted photograph shall include the description of the subject matter of the photograph (e.g., site overview, operations, pit wall or quarry face, stock pile, processing area, etc.), in addition to the date of the photo, the approximate location where the image was captured (either WGS84 coordinates or reference to the site map), and the orientation of the photo.

For purposes of 700 CMR 19.06(2)(b)(20) manufactured sand or coarse aggregate from quarried rock, core holes shall penetrate at least 5 feet below the proposed operating horizon. In stratified or layered rock, drill holes should intersect all strata, or layers, that will be quarried. Holes may be vertical, horizontal, or at any angle to meet this requirement. Core orientation, terminal depth or length, and diameter shall be determined by the quarry operator in consultation with a professional geologist to provide enough material for lithologic identification. Cores shall be protected from the environment and sealed within 24 hours of coring. If, in the opinion of the Aggregate Manufacturer's geologist and State Geologist, the structural and stratigraphic continuity permits, the drill holes may be located up to 1000 feet apart. Operations shall be limited to a maximum radius of 250 feet beyond the farthest drill hole or exposed quarry faces used for identifying geology in any direction. New cores shall be drilled and analyzed whenever the proposed quarrying will extend beyond the area or depth covered by existing cores, i.e. when the operation is to be extended more than 250 feet beyond the farthest drill hole or when strata are to be quarried that have not been intersected previously. The sampled cores used for the site geology determination shall be adequately sealed, identified, and stored at the Aggregate Manufacturer's facility.

For purposes of 700 CMR 19.06(2)(b)(20), however, for natural aggregates (natural sand and gravel), representative field samples shall be obtained and sealed, to conduct the analyses identified in this section. Sampling for natural aggregates shall meet the same geolocating and maximum spacing requirements previously identified herein.