

ODOT Source Approval Policy for:

## **COARSE AGGREGATE FOR USE IN PORTLAND CEMENT CONCRETE (PCC)**

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### **SCOPE**

Aggregate sources producing coarse aggregate material for use in PCC and are requesting approval to supply to the Oklahoma Department of Transportation (ODOT) for use in Highway Construction Projects, must fulfill the following requirements described in the aggregate source, geological assessment report, coarse aggregate material testing by the source, and submittal of final report sections.

Prior to any aggregate approval, the coarse aggregate material will be tested and evaluated by the Materials Division of the Oklahoma Department of Transportation, as noted in Materials Division sampling, testing, and evaluation and Materials Division acceptance or denial, as described below. Only materials meeting these requirements and the requirements as per ODOT Standard Specification 701.06, will be listed on the Approved Rock, Stone, and Sand sources list to provide coarse aggregate material.

### **AGGREGATE SOURCE**

The required information listed below shall be on the official letterhead of the operating company.

#### **Required information:**

- The name of the source (how it should be listed on the Materials Division sources list)
- Type of material being quarried (Sandstone, Limestone, etc.)
- Legal description of the property (Section-Township-Range) and County where source is located
- Physical address of the source
- Mailing address for correspondence
- Current, up to date proof/certificate of the on-site, operational scale
- GPS coordinates (Decimal-Degree format) of the scale house
- Google Earth image of the source location
- Contact info for personnel at the source:
  - Names and Titles
  - Email
  - Direct and cell phone numbers

## **GEOLOGICAL ASSESSMENT REPORT**

The geological assessment shall be prepared by a Professional Geologist. The report shall include at a minimum, discussion of the topics as outlined below and the coarse aggregate test results.

### **Description in detail of:**

- Stone or rock type
- Mineralogy of stone or rock type
- Geologic Formation(s) of the associated stone or rock type
- Color(s) of the stone or rock type (weathered and fresh)
- Structure, both local and regional, as associated with the source's geologic formations
- Feasibility of aggregate for use in transportation related applications
- Any nearby quarry producing from similar geologic formations

### **Photos clearly depicting:**

- All bench(s) or ledge faces, active or not, that are currently being mined or excavated
- Shot rock from blasting or that is temporarily being stockpiled near the mining footprint
- Rock cores drilled
- Stockpiles of various aggregate types

## **COARSE AGGREGATE MATERIAL TESTING BY THE SOURCE**

The source will retain the services of an ODOT qualified and AASHTO accredited private testing laboratory, to sample their coarse aggregate material and perform the required tests that are bulleted below.

For a list of ODOT qualified laboratories, see the website link below:

<https://oklahoma.gov/odot/business-center/materials/materials.html>

For a list of AASHTO accredited laboratories, see the website link below:

<https://aashtoresource.org/>

### **AASHTO (T, R) and ASTM (D) Tests:**

- T-11
- T-19
- T-27
- T-85
- T-96
- T-112
- T-210 (Coarse)
- T-255
- T-327
- R-76
- R-90
- D4791
- D5821

In addition to the testing, a visual description of the coarse aggregate material addressing any deleterious substances or unusual test results shall also be included in the final report. Any additional test results not listed herein (such as Alkali-Silica Reactivity testing, magnesium/sodium sulfate soundness loss, or rapid freezing and thawing of concrete), that the source would like to include with the report, will also be considered.

### **SUBMITTAL OF FINAL REPORT**

A final report, containing all the information described in the aggregate source, geological assessment report, and coarse aggregate material testing by the source sections, shall be submitted in hard copy format, mailed, to the address listed at the top of this letter, attention Materials Division Engineer.

### **MATERIALS DIVISION SAMPLING, TESTING, AND EVALUATION OF AGGREGATE**

Once the required documentation has been received, the Materials Division will review the submittal. A determination will be made whether to sample the aggregate materials, or not. If the submittal is deemed acceptable, the Materials Division will contact the producer or their representative to schedule a time and date to sample the material for testing and evaluation. It should be noted that prior to any sampling trip made by the Materials Division the producer must have a substantial amount (no less than 2,000 tons) of stockpiled coarse aggregate material. The stockpile shall be representative of the coarse aggregate material which will be produced for ODOT use. If the quantity of the stockpiled coarse aggregate is deemed to not be of a substantial amount upon arrival at the source, the material will not be sampled. The aggregate source will not be sampled until such time that there is sufficient material stockpiled and it is the producer's responsibility to adhere to these guidelines.

All sampled material will undergo testing as outlined in the coarse aggregate material testing section, in addition to Freeze-Thaw testing by AASHTO T-161, Procedure A modified to 350 cycles. This test method is a lengthy process that can take up to twelve (12) months to complete. While the aggregate is being tested, provisional source approval will **not** be given.

## **MATERIALS DIVISION ACCEPTANCE OR DENIAL OF AGGREGATE**

If the coarse aggregate material is of sufficient quality to meet the requirements of ODOT Standard Specification 701.06, as evidenced by Materials Division test results, the source may be approved to provide coarse aggregate material to ODOT Highway Construction Projects for a specific length of time. The source will be listed on the Approved Rock, Stone, and Sand Sources list. The source will be subject to future testing at the discretion of the ODOT Materials Division. Any private lab test results submitted to the Materials Division with the final report are solely for information in determining whether ODOT Materials Division will sample aggregate material for testing and does not afford the source any kind or type of aggregate approval. Any aggregate material approvals will be based on Materials Division test results only.

If the material is not of sufficient quality to meet the requirements of ODOT Standard Specification 701.06, as evidenced by Materials Division test results, the source will not be approved to provide coarse aggregate material to ODOT Highway Construction Projects. Re-sampling of the source may only be approved by the Materials Engineer based on the outcome of the failing test results.

## REVISION HISTORY

**3/15/2024:** This policy replaces the previous policy titled “ODOT Coarse Aggregate Source Approval Policy” dated 10/18/2016.

**5/16/2024:** The language under the heading “Coarse Aggregate Material Testing by the Source” has been revised to clarify which entity is performing the sampling and testing of the coarse aggregate material.

**5/29/2024:** The language in the title has been revised from “Guidance for Approval” to “ODOT Source Approval Policy for” the material discussed herein. Additionally, the header and footers have been removed.