

Alkali-Silica Reactive Aggregates

The following aggregate sources have exhibited alkali-silica reactivity in the field and/or laboratory. Concrete mix designs with these aggregates require a pozzolan if the alkalinity of the cement exceeds 0.4 %, as required by Section 1024-1(A) of the NCDOT Standard Specifications for Roads and Structures.

The specification states that “cement with a higher alkali content not to exceed 1 % is allowed if used with Class F fly ash, ground granulated blast furnace slag, microsilica or other Department-approved pozzolans” in a required amount. See the specification for details.

Stone from the following quarries has exhibited ASR in the field and laboratory:

Owner	Location	Quarry Number
Hanson	Princeton	CA 64
Martin Marietta	Pomona	CA 51
	Thomasville	CA 102
Vulcan	Gold Hill	CA 85

Stone from the following quarries has exhibited ASR in the laboratory:

Martin Marietta	Asheboro	CA 30
	Bakers	CA 32
Vulcan	Havre de Grace (Maryland)	CA 345