COLORADO DEPARTMENT OF TRANSPORTATION

PRE-APPROVED PRODUCT EVALUATION REQUEST & SUMMARY

APL Reference No. 5036-20

Product Evaluation Coordinator
Colorado Department of Transportation
4670 North Holly Street, Unit A
Denver, Colorado 80216

Material code: 701.02.04.00

Material code description full name: Pozzolan, High Reactivity

FOR INTERNAL CDOT USE

PART 1

Product name: TEPHRA NP - Pueblo Colorado

Product category: Concrete\Pozzolan\Pozzolan, High Reactivity

Product Representative (name & address):
Attn: Ed Dvorak
CR Minerals Company, LLC.
14014 Quail Ridge Dr.
Broomfield, CO 80020
Phone: (720) 201-4875 E-mail: ed.dvorak@crminerals.com
Web-site address: www.crminerals.com

Manufacturer (name & address):
Attn: Shane Allen
CR Minerals Company, LLC.
3345 Lime Rd.
Pueblo, CO 81004
Phone: (719) 239-7146 E-mail: shane.allen@crminerals.com
Web-site address: www.crminerals.com

Description of the product: (Include specific quantifiable details from tech data sheet. Advertising generalities are not appropriate.)

TEPHRA NP -Pueblo Colorado Fly Ash Class N Pozzolan
ASR mitigation: ASTM C 1567 -0.01% @ 7days, 0.01% @ 28 days
Sulfate Resistance: ASTM C 1012 Meets Class 3 @ 6,12,18 months***
Specific Gravity: 2.3 - 2.4
Passing 325 mesh: 90 % +
Water Demand: 98~102% of cement control
Strength Activity Index: (SAI) 85-95% @ 7 days. 95-100% @ 28 days of control
*** In progress at CTL (Test started 08/08/19, 6 month result due 02/08/2020)

Restrictions, (installation and/or use):
None

Use of the product, (be specific to CDOT highway activities only):
TEPHRA NP may be incorporated into all ready-mix concrete, precast, and other concrete products

Benefits to CDOT, (how will your product enhance quality, improve safety, save money, be a better value then other manufacturer's products):

1. In State supplier for a product meeting C-618 Class N specification
2. Exceptional mitigation of ASR and resistant to sulfate attack per ASTM C1567 and C1012 respectively
3. Value engineered ready-mix concrete mix designs incorporating TEPHRA NP potentially provide significant in-place cost savings

Specifications: (listing those applicable is required)

- ☐ CDOT :
- ☑ ASTM : C-618, C-1567, C-1012
- ☑ AASHTO : M-295
- ☐ FHWA :
- ☐ other :

☑ Certificate of Compliance (COC) provided ☐ Certificate of Verification (COV) provided for select categories ONLY

Product Testing: (National/independent laboratories or universities with Report Date.) **Certified Test Report** (CTR) provided to validate all claims.

- ☐ NTPEP-AASHTO :
- ☐ FHWA :
- ☑ other : CTL/Thomson Test Report ASTM C618, C1567 (November 19, 2019)
- ☐ other :
- ☐ other :

State DOT Approvals, (current documentation required): Expiration Date 4 Yrs / 01-28-2024

Sample submitted: ☐ yes ☑ no ☐ n/a Safety Data Sheets (SDS): ☑ yes ☐ no ☐ n/a

Alternate Product Category: 701.02.02.00 Fly Ash Class F
Additional Comments:
Natural pozzolan sourced from Colorado