



WEAVER GENERAL CONSTRUCTION COMPANY
 3679 S. Huron St., Suite 404
 Englewood, CO 80110
 Phone: (303) 789-4111 FAX: (303) 789-4310

SUBMITTAL TRANSMITTAL

April 28, 2011

WGC Submittal No: 03300-011

PROJECT: **Harold Thompson Regional WRF**
 Birdsall Rd.
 Fountain, CO 80817
 Job No. 2908

ENGINEER: **GMS, Inc.**
 611 No. Weber St., #300
 Colorado Springs, CO 80903
 719-475-2935 Roger Sams

OWNER: **Lower Fountain Metropolitan
 Sewage Disposal District**
 901 S. Santa Fe Ave.
 Fountain, CO 80817
 719-382-5303 James Heckman

CONTRACTOR: **Garney Companies Inc.**
 7911 Shaffer Parkway
 Littleton, CO 80127

SUBJECT: Concrete Mix Design for Clarifier Caissons

SPEC SECTION: 03300 - Cast-In-Place Concrete

PREVIOUS SUBMISSION DATES: None

DEVIATIONS FROM SPEC: ___ YES X NO

CONTRACTOR'S STAMP: This submittal has been reviewed by Weaver General Construction and approved with respect to the means, methods, techniques, & safety precautions & programs incidental thereto. Weaver General Construction also warrants that this submittal complies with contracted documents and comprises on deviations thereto:

Contractor's Stamp:

Engineer's Stamp:

Date: 4/28/11
 Reviewed by: H.C. Myers
 (X) Reviewed Without Comments
 () Reviewed With Comments

**ENGINEER'S
 COMMENTS:** _____

J. B. Morgan, P. E., C.C.E.

CONSULTING STRUCTURAL ENGINEER



Summary of Concrete Mix Data

Table NO. 104-4 (Air Entrained Flowable Concrete w/ Fly Ash @ 5" - 7" Slump)

Client: Transit Mix Concrete CO
 Project: Plant Mixes
 Aggregates: ASTM C 33 Coarse and Fine
 Cement: ASTM C 150 Type I-II
 Fly Ash: ASTM C 618 Class F
 Admixtures: ASTM C 494 AE, WRA and HRWRA

43702110
↓

<u>MIX PROPORTIONS</u>	4.00	4.50	5.00	5.50	5.75	6.00	6.50	7.00	7.50
Cement (Type I-II), lbs.	321	360	400	439	460	480	519	559	599
Fly Ash (Class F), lbs.	55	63	70	78	81	84	92	99	106
Total Cementitious, lbs	376	423	470	517	541	564	611	658	705
Air Entrainer, oz.	3.1	3.6	4.1	4.5	4.8	5.2	5.6	6.1	6.4
Water Reducer, oz.	11.3	12.7	14.1	15.5	16.2	16.9	18.3	19.7	21.2
High Range Water Reducer, oz.	18.8	21.2	23.5	25.8	30.8	35.8	38.7	41.5	44.3
Fine Aggregate, lbs.	1470	1430	1390	1350	1333	1315	1275	1235	1195
# 57/67 Coarse Aggregate, lbs.	1700	1700	1700	1700	1700	1700	1700	1700	1700
Water, gallons	31.4	31.7	32.0	32.2	31.2	30.5	31.5	31.9	33.0
Water, lbs.	261.6	264.1	266.6	268.2	260	254.1	262.4	265.7	274.9

PHYSICAL PROPERTIES

Wet Unit WT. (PCF)	139.4	139.7	139.9	140.3	140.5	140.6	140.9	141.1	141.3
Slump (Inches)	7.00	6.75	6.50	6.75	6.5	6.50	6.50	6.75	6.00
Air Content, %	5.0	5.1	5.5	5.8	5.7	5.6	6.0	5.5	5.2
Water Cement Ratio	0.70	0.62	0.57	0.52	0.48	0.45	0.43	0.40	0.39
Temperature, (°F)	75	75	76	77		78	78	80	81

COMPRESSIVE STRENGTH

	<u>2000</u>	<u>2500</u>	<u>3000</u>	<u>3500</u>	<u>4000</u>	<u>4500</u>	<u>5000</u>	<u>5500</u>
3 Day Average	1780	2290	2740	3180	3520	3860	4360	4650
7 Day Average	2320	2900	3750	4080	4285	4490	4890	5520
28 Day Average	3000	3510	4040	4610	5150	5690	6250	7060

Date Tested: Tuesday, May 05, 2009

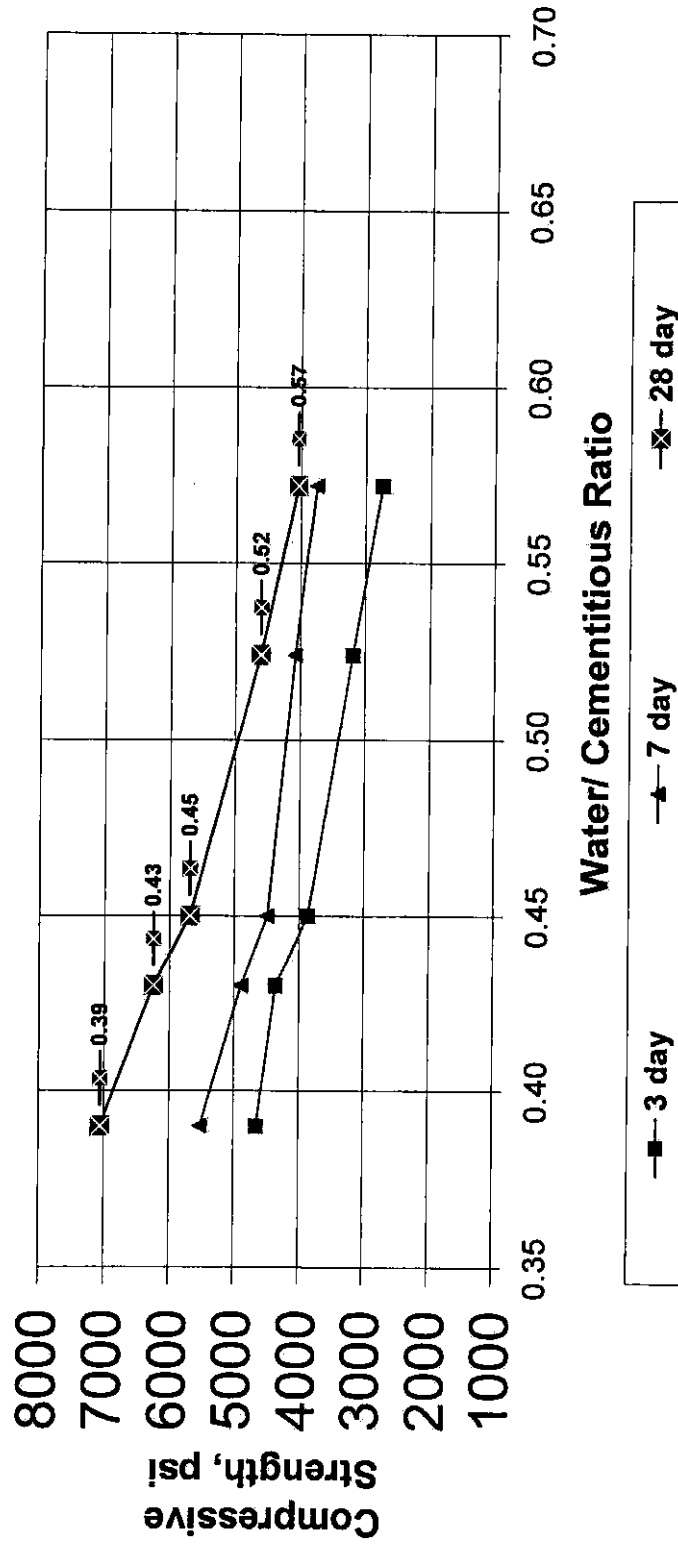
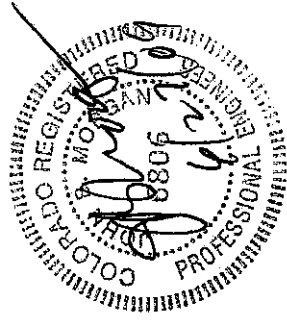
400 South 7th Street, Raton, New Mexico 87740

Phone: (575) 445-8738 • Mobile: (719) 332-4557 • Fax: (575) 445-7055

Transit Mix Concrete Company

Table NO. 104-4-WC

Compressive Strength vs. Water Cementitious Ratio



Material Certification Report

Material: Portland Cement
Type: I-II (MH)(ASTM C 150)

Test Period: 01-Dec-2010
To: 31-Dec-2010

Certification

Holcim cement meets the specifications of ASTM C 150 for Type I-II cement.

General Information

Supplier: Holcim (US) Inc.
Address: 3500 State Highway 120
Florence, Co. 81226
Telephone: 719-784-1307
Date Issued: 12-Jan-2011

Source Location: Portland Plant
3500 State Highway 120
Florence, Co. 81226
Contact: Dick Roush

The following information is based on average test data during the test period. The data is typical of cement shipped by Holcim; individual shipments may vary.

Tests Data on ASTM Standard Requirements

Chemical			Physical		
Item	Limit ^A	Result	Item	Limit ^A	Result
SiO ₂ (%)	-	19.7	Air Content (%)	12 max	6
Al ₂ O ₃ (%)	6.0 max	4.6	Blaine Fineness (m ² /kg)	260 min	401
Fe ₂ O ₃ (%)	6.0 max	3.2			
CaO (%)	-	63.3	Autoclave Expansion (%) (C 151)	0.80 max	0.00
MgO (%)	6.0 max	1.5	Compressive Strength MPa (psi):		
SO ₃ (%) ^C	3.0 max	3.4			
Loss on Ignition (%)	3.0 max	2.4			
Insoluble Residue (%)	0.75 max	0.40	3 days	12.0 (1740) min	30.7 (4480)
CO ₂ (%)	-	1.3	7 days	19.0 (2760) min	36.6 (5310)
Limestone (%)	5.0 max	3.6	Initial Vicat (minutes)	45-375	143
CaCO ₃ in Limestone (%)	70 min	83			
Inorganic Processing Addition	5.0 max	0.0	Mortar Bar Expansion (%) (C 1038)	-	0.001
Potential Phase Compositions ^D :					
C ₃ S (%)	-	58			
C ₂ S (%)	-	12			
C ₃ A (%)	8 max	7			
C ₄ AF (%)	-	10			
C ₃ S + 4.75C ₃ A (%)	-	91			

Tests Data on ASTM Optional Requirements

Chemical			Physical		
Item	Limit ^A	Result	Item	Limit ^A	Result
Equivalent Alkalies (%)		0.68	Heat of Hydration: 7 days, kJ/kg (cal/g) ^B	-	354 (85)

Notes

^A Dashes in the limit / result columns mean Not Applicable.

^B Test result represents most recent value and is provided for information only. Analysis of Heat of Hydration has been carried out by CTLGroup, Skokie, IL.

^C It is permissible to exceed the specification limit provided ASTM C 1038 Mortar Bar Expansion does not exceed 0.020 %.

^D Adjusted per Annex A1.6 of ASTM C150 and AASHTO M85.

This data may have been reported on previous mill certificates. It is typical of the cement being currently shipped.

Transit Mix Concrete
 Attn: Robert Montoya
 444 E Costilla St.
 Colorado Springs, CO 80903-3761

PHOENIX CEMENT

Product: Class F Fly Ash, Cholla Fly Ash
 ASTM C 618

Corporate Headquarters
 8800 E Chaparral Rd, Ste 155
 Scottsdale, AZ 85250
 Phone: 480-850-5757
 Fax: 480-850-5758

Cement Manufacturing
 3000 W Cement Plant Rd
 Clarkdale, AZ 86324
 Phone: 928-634-2261
 Fax: 928-634-3543

19th Avenue Facility
 1802 W Lower Buckeye Rd
 Phoenix, AZ 85007
 Phone: 602-253-9149
 Fax: 602-253-9160

Lower Buckeye Facility
 1941 W Lower Buckeye Rd
 Phoenix, AZ 85009
 Phone: 602-258-7798
 Fax: 602-525-3362

21st Avenue Facility
 1325 N 21st Avenue
 Phoenix, AZ 85009
 Phone: 602-254-3824
 Fax: 602-254-3825

Mesa Community Storage
 Dobson & McKellips
 Mesa, AZ 85211
 Phone: 480-990-7847

Cholla Fly Ash Facility
 P O Box 380
 Joseph City, AZ 86032
 Phone: 928-288-1661
 Fax: 928-288-1663

Four Corners Fly Ash Facility
 P O Box 1007
 Fruitland, NM 87416
 Phone: 505-598-8657
 Fax: 505-598-8633

San Juan Fly Ash Facility
 San Juan Generating Station
 Waterflow, NM 87421
 Phone: 505-598-7546
 Fax: 505-598-7547

Escalante Fly Ash Facility
 CR19 / P O Box 620
 Prewitt, NM 87405
 Phone: 505-285-4590
 Fax: 505-285-4667

Gallup Fly Ash Facility
 9001/4 N 9th St.
 Gallup, NM 87305

12-20-10 POZZOLAN TEST REPORT Cxl#: 49052

Lot: 2060	Results	Specifications
Chemical Analysis (C311 / C114 / D4326)		
Silicon Dioxide, SiO ₂	58.75 %	---
Aluminum Oxide, Al ₂ O ₃	23.97 %	---
Ferric Oxide, Fe ₂ O ₃	5.57 %	---
SiO ₂ + Al ₂ O ₃ + Fe ₂ O ₃	88.29 %	70.00 Min
Calcium Oxide, CaO	3.14 %	---
Magnesium Oxide, MgO	1.05 %	---
Sulfur Trioxide, SO ₃	0.30 %	5.00 Max
Moisture Content	0.14 %	3.00 Max
Loss on Ignition	0.26 %	6.00 Max
Available Alkalis as Na ₂ O	0.22 %	---
Alkalis (%Na ₂ O + 0.658% K ₂ O)	1.50 %	---
R Factor (%CaO -5) / (%FeO)	-0.33 %	---

Physical Analysis		
Fineness, amount retained on		
#325 sieve, % (C430)	16.10	34.00 Max
variation, points from average	0.73	5.00 Max
Density, g/cm ³ (C188)	2.20	---
Variation from average, %	0.00	5.00 Max
Strength Activity Index		
with Portland Cement (C311 / C109)		
at 7 days, % of cement control	86.60	---
at 28 days, % of cement control	88.03	75.00 Min
Water Requirement (C311)		
% of cement control	95.45	105.00 Max
Soundness, autoclave expansion (C311 / C151)		
or contraction, %	-0.03	0.80 Max

All tests have been made in strict accordance with the current standards of the American Society for Testing and Materials covering the type of material specified.


 Lee Gorby, Quality Assurance Manager
 26 JAN 2011





The Chemical Company

January 27, 2011

Transit Mix Concrete CO
444 East Costilla
Colorado Springs, Colorado 80903

Attention: Robert Montoya
Project: Various
Project location: Various

Certificate of Conformance
PolyHeed® 1020
BASF Corporation* Admixture for Concrete

*(successor in interest to BASF Construction Chemicals, LLC , which is successor by merger to BASF Admixtures, Inc., formerly known as Degussa Admixtures, Inc., formerly known as Master Builders, Inc.)

I, Richard Hubbard, Sr. Technical Marketing Specialist for BASF Corporation, Cleveland, Ohio, certify:

That PolyHeed 1020 is a BASF Corporation Mid-Range Water-Reducing Admixture for concrete; and

That no calcium chloride or chloride based ingredient is used in the manufacture of PolyHeed 1020; and

That PolyHeed 1020, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00014 percent (1.4 ppm) chloride ions by weight of the cement when used at the rate of 65 mL per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That, depending on the dosage used, PolyHeed 1020 meets the requirements for a Type A, Water-Reducing and Type F, Water-Reducing, High Range Admixture specified in ASTM C 494, Corps of Engineers' CRD-C 87 and AASHTO M194, the Standard Specifications for Chemical Admixtures for Concrete.

Richard Hubbard
Sr. Technical Marketing Specialist, BASF Corporation

BASF Corporation
23700 Chagrin Boulevard
Cleveland, OH 44122
216 839-7500 ph
www.masterbuilders.com

**Master
Builders**
Admixture Solutions



The Chemical Company

January 27, 2011

Transit Mix Concrete CO
444 East Costilla
Colorado Springs, Colorado 80903

Attention: Robert Montoya
Project: Various
Project location: Various

Certificate of Conformance
Pozzolith® 200 N
BASF Corporation* Admixture for Concrete

*(successor in interest to BASF Construction Chemicals, LLC , which is successor by merger to BASF Admixtures, Inc., formerly known as Degussa Admixtures, Inc., formerly known as Master Builders, Inc.)

I, Richard Hubbard, Sr. Technical Marketing Specialist for BASF Corporation, Cleveland, Ohio, certify:

That Pozzolith 200 N is a BASF Corporation Water-Reducing Admixture for concrete; and

That no calcium chloride or chloride based ingredient is used in the manufacture of Pozzolith 200 N; and

That Pozzolith 200 N, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00013 percent (1.3 ppm) chloride ions by weight of the cement when used at the rate of 65 mL per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That, depending on the dosage used, Pozzolith 200 N meets the requirements for a Type A, Water-Reducing, Type B, Retarding, and Type D, Water Reducing and Retarding Admixture as specified in ASTM C 494, Corps of Engineers' CRD-C 87 and AASHTO M194, the Standard Specifications for Chemical Admixtures for Concrete.

Richard Hubbard
Sr. Technical Marketing Specialist, BASF Corporation

BASF Corporation
23700 Chagrin Boulevard
Cleveland, OH 44122
216 838-7500 ph
www.masterbuilders.com

**Master
Builders**
Admixture Solutions



The Chemical Company

January 27, 2011

Transit Mix Concrete CO
444 East Costilla
Colorado Springs, Colorado 80903

Attention: Robert Montoya
Project: Various
Project location: Various

Certificate of Conformance
MB-AE™ 90
BASF Construction Chemicals, LLC* Air-Entraining Admixture for Concrete

*(successor in interest to BASF Construction Chemicals, LLC , which is successor by merger to BASF Admixtures, Inc., formerly known as Degussa Admixtures, Inc., formerly known as Master Builders, Inc.)

I, Richard Hubbard, Sr. Technical Marketing Specialist for BASF Corporation, Cleveland, Ohio, certify:

That MB-AE 90 is a BASF Corporation Air-Entraining Admixture for concrete; and

That no calcium chloride or chloride based ingredient is used in the manufacture of MB-AE 90; and

That MB-AE 90, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.000068 percent (0.68 ppm) chloride ions by weight of the cement when used at the rate of 65 mL per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That MB-AE 90 meets the requirements of ASTM C 260, Corps of Engineers' CRD-C 13 and AASHTO M154, the Standard Specifications for Air-Entraining Admixtures for Concrete.

Richard Hubbard
Sr. Technical Marketing Specialist, BASF Corporation

BASF Corporation
23700 Chagrin Boulevard
Cleveland, OH 44122
216 839-7500 ph
www.masterbuilders.com

**Master
Builders**
Admixture Solutions



The Chemical Company

January 27, 2011

Transit Mix Concrete CO
444 East Costilla
Colorado Springs, Colorado 80903

Attention: Robert Montoya
Project: Various
Project location: Various

Certificate of Conformance
PolyHeed® 1020
BASF Corporation* Admixture for Concrete

*(successor in interest to BASF Construction Chemicals, LLC , which is successor by merger to BASF Admixtures, Inc., formerly known as Degussa Admixtures, Inc., formerly known as Master Builders, Inc.)

I, Richard Hubbard, Sr. Technical Marketing Specialist for BASF Corporation, Cleveland, Ohio, certify:

That PolyHeed 1020 is a BASF Corporation Mid-Range Water-Reducing Admixture for concrete; and

That no calcium chloride or chloride based ingredient is used in the manufacture of PolyHeed 1020; and

That PolyHeed 1020, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00014 percent (1.4 ppm) chloride ions by weight of the cement when used at the rate of 65 mL per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That, depending on the dosage used, PolyHeed 1020 meets the requirements for a Type A, Water-Reducing and Type F, Water-Reducing, High Range Admixture specified in ASTM C 494, Corps of Engineers' CRD-C 87 and AASHTO M194, the Standard Specifications for Chemical Admixtures for Concrete.

Richard Hubbard
Sr. Technical Marketing Specialist, BASF Corporation

BASF Corporation
23700 Chagrin Boulevard
Cleveland, OH 44122
216 839-7500 ph
www.masterbuilders.com

**Master
Builders**
Admixture Solutions

Transit Mix Concrete Co. Materials Laboratory

444 East Costilla Avenue
Colorado Springs, Colorado 80903
Ph. (719) 475-0700 Fax (719) 475-0226

2596 Hwy 96 East
Pueblo, Colorado 81002
Ph. (719) 543-7898 Fax (719) 583-0345

July 8, 2010

RE: No. 57/67 Coarse Concrete Aggregate
Castle Concrete
7250 Allegheny Drive
Colorado Springs, CO 80919

Gentlemen:

This letter presents the results of physical properties and deleterious substances tests performed on a coarse aggregate that was sampled on June 7, 2010 at Black Canyon Quarry.
The results are as follows:

Sieve Size	Percent Passing	Specifications	
		No. 57	No. 67
37.5 mm, 1 1/2"	100	100	----
25.0 mm, 1"	100	95 - 100	100
19.0 mm, 3/4"	95	----	90 - 100
12.5 mm, 1/2"	54	25 - 60	----
9.5 mm, 3/8"	29	----	20 - 55
4.75 mm, No. 4	5.2	0 - 10	0 - 10
2.36 mm, No. 8	3.7	0 - 5	0 - 5
75 um, No. 200	0.9	0 - 1.5	0 - 1.5
Los Angeles Abrasion (Grading B):	28.0% Loss	AASHTO	T-96
Bulk Specific Gravity (SSD):	2.63 Absorption: 1.4%	AASHTO	T-85
Magnesium Sulfate Soundness (Five Cycles):	6.7% Loss	AASHTO	T-104
Sodium Sulfate Soundness (Five Cycles):	4.8% Loss	AASHTO	T-104
Clay Lumps and Friable Particles:	0	AASHTO	T-112
Fractured Particles (2 Fractured Faces):	100%		
Organic Impurities:	Clear	AASHTO	T-21
Bulk Density by Rodding:	98 lb/ft ³ Voids: 40%	AASHTO	T-19
Mortar Bar Expansion (ASR) - Sodium Hydroxide:		0.03%	ASTM C 1260

The above sample was tested according to American Society for Testing and Materials (ASTM) procedures D-75, D-5821, C-702, C-117, C-136, C-33, C-40, C-142, C-88, C-127, C-131, C-29 and C-1567.

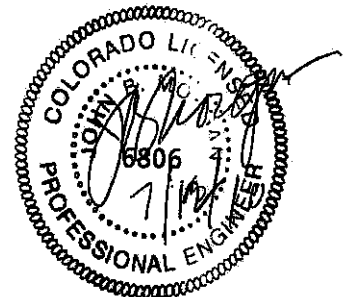
The above sample conforms to the requirements of ASTM C 33, TABLE 3, *Limits for Deleterious Substances and Physical Property Requirements of Coarse Aggregate for Concrete*, (1S, 2S, 3S, 4S, 5S, 1M, 2M, 3M, 4M, 5M, 1N and 2N).

If you have any questions feel free to contact me at your earliest convenience.

Respectfully Submitted,



Grant W. Smith
Quality Control Manager



Transit Mix Concrete Co. Materials Laboratory

444 East Costilla Avenue
 Colorado Springs, Colorado 80903
 Ph. (719) 475-0700 Fax (719) 475-0226

2596 Hwy 96 East
 Pueblo, Colorado 81002
 Ph. (719) 543-7898 Fax (719) 583-0345

Modified ASTM C 1260 / C 1567 Tests

No. 004806BC

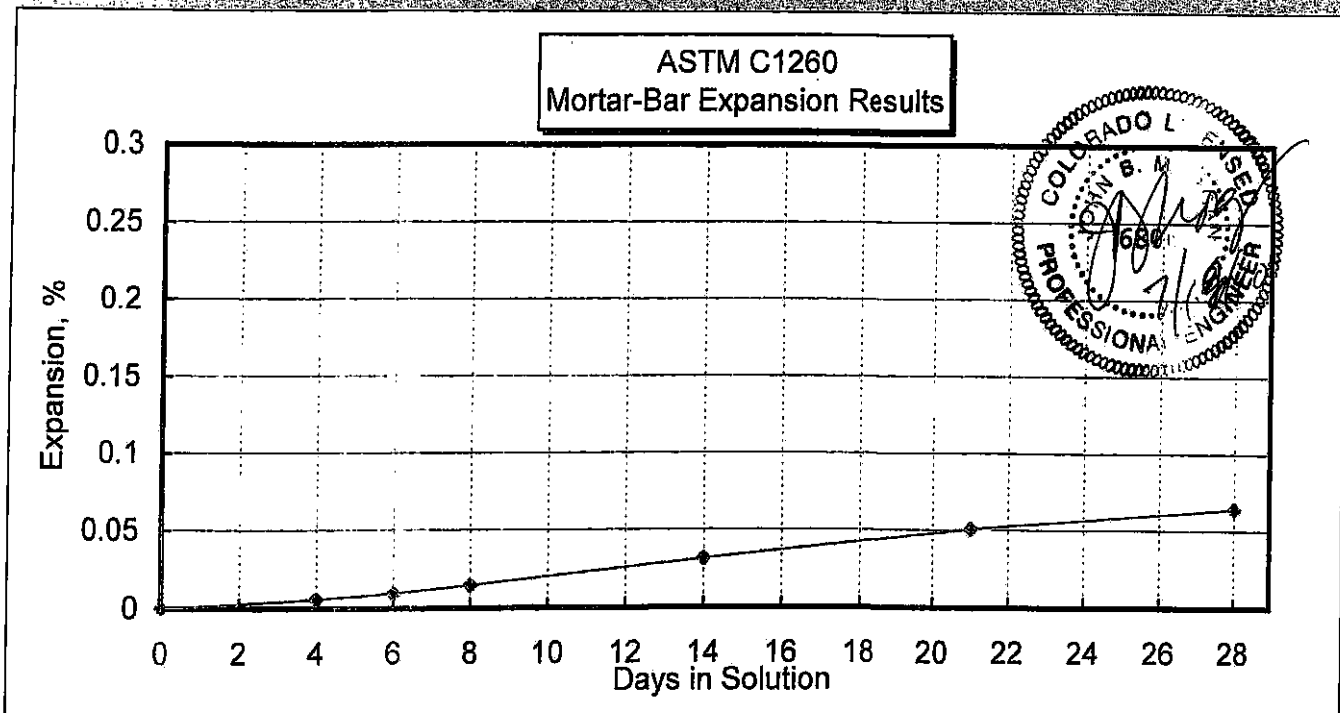
Standard Test Method for Accelerated Detection of Potentially Deleterious Expansion of Mortar Bars Due to Alkali-Silica Reaction

Materials	Source		Type	Qty.	Batch Weights, g	Notes
Cement	Holcim	Florence, CO	I/II	100%	440	Batched: 6/8/2010
Flyash				0%	0	
Coarse	Black Canyon	Colo Spgs, CO	57/67		990	
Sand						
Water					206.8	
W/C Ratio					0.47	Completed: 7/8/2010

Specimen ID:		BC -1, BC - 2, BC - 3						
Days	Date	Comparator Readings			Mortar Bar Expansion, %			Average
		1	2	3	1	2	3	
0	6/10/2010	0.1680	0.1708	0.1622				0.0000
4	6/14/2010	0.1685	0.1714	0.1629	0.0050	0.0060	0.0070	0.0060
6	6/16/2010	0.1675	0.1723	0.1641	-0.0050	0.0150	0.0190	0.0097
8	6/18/2010	0.1681	0.1729	0.1644	0.0010	0.0210	0.0220	0.0147
14	6/24/2010	0.1698	0.1738	0.1669	0.0180	0.0300	0.0470	0.0317
21	7/1/2010	0.1718	0.1748	0.1697	0.0380	0.0400	0.0750	0.0510
28	7/8/2010	0.1733	0.1759	0.1711	0.0530	0.0510	0.0890	0.0643

Average Percent Expansion at 14 days in solution (16 days of age) 0.03

28 Day expansion results are for informational purposes only 0.06



Transit Mix Concrete Co. Materials Laboratory

444 East Costilla Avenue
Colorado Springs, Colorado 80903
Ph. (719) 475-0700 Fax (719) 475-0226

2596 Hwy 96 East
Pueblo, Colorado 81002
Ph. (719) 543-7898 Fax (719) 583-0345

October 18, 2010

Daniels Sand Company
3710 Bradley Road
Colorado Springs, Colorado 80916

RE: Fine Concrete Aggregate

Gentlemen:

This letter presents the results of physical properties and deleterious substances tests performed on a Fine Concrete Aggregate that was sampled on September 9, 2010 at Daniels Sand Pit. The results are as follows:

Sieve Size	Percent Passing	Specifications
		ASTM C 33 Fine Concrete Agg.
9.5 mm, 3/8"	100	100
4.75 mm, No. 4	100	95 - 100
2.36 mm, No. 8	88	80 - 100
1.18 mm, No. 16	62	50 - 85
600 um, No. 30	40	25 - 60
300 um, No. 50	21	10 - 30
150 um, No. 100	7.0	0 - 10
75 um, No. 200	0.8	0 - 3
Fineness Modulus: 2.80		AASHTO T-37
Bulk Specific Gravity (SSD): 2.59	Absorption: 1.1%	AASHTO T-85
Magnesium Sulfate Soundness (Five Cycles): 2.0%	Loss	AASHTO T-104
Sodium Sulfate Soundness (Five Cycles): 1.0%	Loss	AASHTO T-104
Clay Lumps and Friable Particles: 0		AASHTO T-112
Average Sand Equivalent: 88		AASHTO T-176
Organic Impurities: Clear		AASHTO T-21
Mortar Bar Expansion (ASR) - Sodium Hydroxide: 0.04%		AASHTO T-303

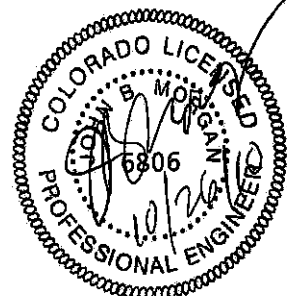
The above sample was tested according to American Society for Testing and Materials (ASTM) procedures D-75, D-2419, C-702, C-117, C-136, C-33, C-40, C-142, C-88, C-128 and C-1260.

If you have any questions feel free to contact me at your earliest convenience.

Respectfully Submitted,



Grant W. Smith
Quality Control Manager



Transit Mix Concrete Co. Materials Laboratory

444 East Costilla Avenue
 Colorado Springs, Colorado 80903
 Ph. (719) 475-0700 Fax (719) 475-0226

2596 Hwy 96 East
 Pueblo, Colorado 81002
 Ph. (719) 543-7898 Fax (719) 583-0345

Modified ASTM C 1260 / C 1567 Tests

No. 0237D-9-14

Standard Test Method for Accelerated Detection of Potentially Deleterious Expansion of Mortar Bars Due to Alkali-Silica Reaction

Materials	Source			Batch Weights, g	Notes
Cement	Holcim	Florence, CO	100%	440	Batched: 9/16/2010
Flyash			0%	0	
Coarse Sand	Daniels	Colo Spgs, CO	No. 8	990	
Water				206.8	
W/C Ratio				0.47	Completed: 10/16/2010

Specimen ID:		D No. 8 1, 2, 3						
Days	Date	Comparator Readings			Mortar Bar Expansion, %			Average
		1	2	3	1	2	3	
0	9/18/2010	0.1601	0.1699	0.1710				0.0000
4	9/22/2010	0.1615	0.1718	0.1720	0.0140	0.0190	0.0100	0.0143
7	9/25/2010	0.1624	0.1732	0.1722	0.0230	0.0330	0.0120	0.0227
9	9/27/2010	0.1635	0.1726	0.1740	0.0340	0.0270	0.0300	0.0303
14	10/2/2010	0.1648	0.1737	0.1752	0.0470	0.0380	0.0420	0.0423
20	10/8/2010				-1.6010	-1.6990	-1.7100	
28	10/16/2010							

Average Percent Expansion at 14 days in solution (16 days of age)

0.04

28-Day expansion results are for informational purposes only

