APPROVED/QUALIFIED PRODUCER LIST OF FINELY DIVIDED MINERALS July 24, 2015

This list supersedes the May 29, 2015 list.

Standard Specifications for Road and Bridge Construction Section 1010 (Adopted January 1, 2012)

Current Policy Memorandum, "Acceptance Procedure for Finely Divided Minerals Used in Portland Cement Concrete and Other Applications."

For information regarding new product submittal, click the "New Submittal" bookmark to the left.

FLY ASH

SUPPLIER:	Charah Inc., 12601 Plantside Dr., Louisville, KY 40299
	(Contact: Danny Gray, P.E., Ph 502-245-1353 FAX: 502-245-7398

Source	<u>Unit No.</u>	Producer/ Supplier No.	<u>Class</u>	Material Code No.	R <u>Factor</u> ⁴	Average Specific <u>Gravity</u>
Louisville Gas & Electric ^B Mill Creek Power Station Louisville, KY	1,2,3,4	52503-05	F	37802	-0.05	2.67
Indianapolis P & L Co. ^B Petersburg Power Station Petersburg, IN	3, 4	52103-12	F	37802	-0.14	2.53

SUPPLIER: Fly Ash Direct Ltd., 4228 Airport Rd. Cincinnati, OH 45226 (Contact Scott Keith, Operations Manager, Ph: 513-871-9733 FAX: 513-871-1974)

Average Specific Producer/ Material Factor A Source Unit No. Supplier No. Class Code No. Gravity Duke Energy ^B 6 52103-02 F 37802 -0.262.40 Wabash River Gen. Station West Terre Haute, IN City Water, Light & Power B F 51679-01 37802 0.09 2.44 Dallman Station Springfield, IL

Electric Energy Inc./Dynegy,Inc ^{B,D} 1,2,3,4,5, 51273-01 C 37801 3.39 2.72 Joppa Power Plant 6 Joppa, IL

SUPPLIER: National Minerals Corp., 2978 Center Court, Eagan, MN 55121 (Contact Travis Collins, Vice President, Ph. 651-454-4151

<u>Source</u>	<u>Unit No.</u>	Producer/ Supplier No.	<u>Class</u>	Material Code No.	R <u>Factor ^A</u>	Average Specific <u>Gravity</u>
Alliant Energy Corporation ^{B,E} Burlington Station Burlington, IA	1	52203-05	С	37801	4.01	2.70
Alliant Energy Corporation ^{B,D} M.L. Kapp Power Station Clinton, IA	1	52203-10	С	37801	3.21	2.73
Alliant Energy Corporation ^{B,D} Ottumwa Station Near Chillicothe, IA	1	52203-02	С	37801	3.40	2.66

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SUPPLIER: Headwaters Resources, 290 Timber Ridge Drive, Marthasville, MO 63357

(Contact: Ben Franklin, Director of Technical Services (Central), Ph. 636-828-4780 FAX: 866-449-8109)

Source	<u>Unit No.</u>	Producer/ Supplier No.	<u>Class</u>	Material Code No.	R <u>Factor ^A</u>	Average Specific <u>Gravity</u>
Associated Electric ^{B,D} Thomas Hill Station Clifton, MO	3	52303-06	С	37801	3.42	2.65
Mid American Energy ^{B,D} Louisa Station Near Muscatine, IA	1	52203-01	С	37801	3.56	2.65
Sikeston Power Plant ^{B,D} Sikeston Station Sikeston, MO	1	52303-05	С	37801	2.54	2.60

SUPPLIER: Headwaters Resources, 1217 Cape Coral Pkwy E 190 Cape Coral, FL 33904

(Contact: Craig Wallace Technical Director Eastern Division, Ph. 239-565-2338 Fax: 866-449-8108

<u>Source</u>	<u>Unit No.</u>	Producer/ Supplier No.	<u>Class</u>	Material <u>Code No.</u>	R <u>Factor</u> ⁴	Average Specific <u>Gravity</u>
Consumer Energy ^{B,D} J. H. Campbell Power Plant West Olive, MI	1,3	52603-02	С	37801	2.77	2.62
Dynegy Midwest ^{B,D} Baldwin Power Station Baldwin, IL	3	51573-01	С	37801	3.60	2.75
Dynegy Midwest ^{B,D} Havana Power Station Havana, IL	6	51253-01	С	37801	4.20	2.74
Dynegy Midwest ^{B,E} Hennepin Station Hennepin, IL	1, 2	51553-01	С	37801	3.91	2.74
Dynegy Midwest ^{B,D} Wood River Power Plant Alton, IL	4,5	51193-94	С	37801	3.29	2.70
Lansing Board of Water & Light ^{B,D} Eckert Station Lansing, MI	1,2,3,4,5, 6	52603-04	С	37801	2.71	2.64

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<u>Source</u>	<u>Unit No.</u>	Producer/ Supplier No.	<u>Class</u>	Material Code No.	R <u>Factor</u> ⁴	Average Specific <u>Gravity</u>
Lansing Board of Water & Light ^{B,D} Erickson Station Lansing, MI	1	52603-03	С	37801	2.55	2.62
Dynegy Midwest ^{B,D} Newton Power Station Newton, IL	1,2	50793-01	С	37801	3.21	2.68
N. Indiana Public Service ^{B,D} Schahfer Power Station Wheatfield, IN	15	52103-18	С	37801	2.85	2.65
N. Indiana Public Service ^B Schahfer Power Station Wheatfield, IN	17,18	52103-18	F	37802	-0.10	2.41
Prairie State Generating Co. ^B Prairie State Station Marissa, IL	1,2	51633-07	F	37802	0.06	2.32

LafargeHolcim, 20408 W. Renwick Rd., Lockport, IL 60441-0089 (Contact Greg Daderko, Technical Director, Ph. 517-228-3742 FAX: 630-505-0330) **SUPPLIER:**

Source	<u>Unit No.</u>	Producer/ Supplier No.	<u>Class</u>	Material Code No.	R <u>Factor</u> ⁴	Average Specific <u>Gravity</u>
Alliant Power ^{B,D} Columbia Station Portage, WI	1, 2	52403-03	С	37801	3.41	2.62
Alliant Power ^{B,D} Edgewater Station Sheboygan, WI	5	52403-05	С	37801	3.18	2.67
EME Midwest Generation ^{B,D} Joliet Station Joliet, IL	7, 8	51973-64	С	37801	3.80	2.78
We-Energies ^{B,D} Oak Creek Station Oak Creek, WI	5,6,7,8	52403-06	С	37801	3.35	2.70
We-Energies ^B Elm Road Station Oak Creek, WI	1	52403-09	F	37802	0.37	2.57
We-Energies ^{B,D} Elm Road Station Oak Creek, WI	2	52403-09	С	37801	1.28	2.62

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<u>Source</u>	<u>Unit No.</u>	Producer/ Supplier No.	<u>Class</u>	Material Code No.	R <u>Factor</u> ^A	Average Specific <u>Gravity</u>
We-Energies ^{B,D} Pleasant Prairie Station Near Kenosha, WI	1, 2	52403-02	С	37801	3.31	2.52
Wisc. Public Service Corp. ^{B,D} Weston Station Rothschild, WI	1,2,3	52403-07	С	37801	2.78	2.64
Muscatine Power & Water ^{B,D} Muscatine Station Muscatine, IA	9	52203-04	С	37801	3.95	2.73

SUPPLIER: Mineral Resource Technologies, Inc. - A Cemex Company,

920 Memorial City Way Suite 100 Houston, TX 77024

(Contact: Oscar Jaramillo, Engineer/QC Ph: 813-220-6537 FAX: 813-677-7597)

<u>Source</u>	<u>Unit No.</u>	Producer/ Supplier No.	<u>Class</u>	Material Code No.	R <u>Factor</u> ⁴	Average Specific <u>Gravity</u>
Ameren UE ^{B,E} Rush Island Power Station Festus, MO	1, 2	52303-07	С	37801	4.01	2.79
Union Electric ^{B,D} Labadie Station Labadie, MO	1, 2	52303-04	С	37801	3.45	2.72

Notes B, C, D, and E apply to the Portland Cement Concrete (BDE) special provision which includes alkali-silica reaction mitigation requirements for cast-in-place, precast, and precast prestressed concrete.

- The R value, an indicator of the relative sulfate resistance of a fly ash, is a ratio of calcium to iron oxide expressed as follows: $R = (\% \text{ CaO} 5) \div (\% \text{ Fe}_2\text{O}_3)$.
- ^B The average equivalent available alkali content (Na₂O + 0.658K₂O) of this fly ash is ≤ 4.50%. However, this does not ensure that fly ash in subsequent shipments will continue to exhibit these properties. Users are advised to request current test data for equivalent available alkali content when specifying fly ash meeting this requirement.
- ^c The average equivalent available alkali content (Na₂O + 0.658K₂O) of this fly ash is > 4.50%.
- The average calcium oxide (CaO) of this Class C fly ash is ≤ 26.50%. However, this does not ensure that fly ash in subsequent shipments will continue to exhibit these properties. Users are advised to request current test data for CaO when specifying fly ash meeting this requirement.
- The average calcium oxide (CaO) of this Class C fly ash is > 26.50%.
- F The fly ash shall not be used in portland cement concrete or cement aggregate mixture II (Article 1010.02 (b)).

APPROVED/QUALIFIED PRODUCER LIST OF FINELY DIVIDED MINERALS July 24, 2015

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GROUND GRANULATED BLAST-FURNACE SLAG

PRODUCER/SUPPLIER:	Skyway Cement Company LLC, 3020 East 103 rd Street, Chicago, IL 60617
	(Contact: Roberto Carrillo, Quality Supervisor, Ph: 800-643-1808 Ex 5910 FAX: 773-978-6811)

<u>Source</u>	Producer/ Supplier No.	<u>Grade</u>	Material <u>Code No.</u>	Average Specific <u>Gravity</u>
Skyway Cement Company ⁸ Chicago Grinding Plant 3020 East 103rd Street Chicago, IL 60617	6968-01	100	37821	2.89

	PRODUCER/SUPPLIER:	LafargeHolcim, 2150 E. 130th St., Chicago, IL 62633
•	_	(Contact: Srivijay Kalidas, Quality and Process Engineer, Ph: 773-646-3150 FAX: 773-646-3360)

<u>Source</u>	Producer/ Supplier No.	<u>Grade</u>	Material <u>Code No.</u>	Average Specific <u>Gravity</u>
LafargeHolcim ^B South Chicago Grinding Facility 215 E. 130th Street Chicago, IL 62633	6967-08	120	37822	2.90
LafargeHolcim ^B South Chicago Grinding Facility 215 E. 130th Street Chicago, IL 62633	6967-08	100	37821	2.89
Supplier for S.Chicago Facility	Supplier No.	<u>Grade</u>	<u>Trade Name</u>	
St. Marys Cement Milwaukee WI Terminal	2207-91	100	CemPlus	
St. Marys Cement Manitowoc WI Terminal	2207-92	100	CemPlus	

Notes A, B apply to the Portland Cement Concrete (BDE) special provision which includes alkali-silica reaction mitigation requirements for cast-in-place, precast, and precast prestressed concrete.

^A The average equivalent available alkali content (Na₂O + 0.658K₂O) of this ground granulated blast-furnace slagis > 1.00%.

The average equivalent available alkali content (Na₂O + 0.658K₂O) of this ground granulated blast-furnace slag is ≤ 1.00%.

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HIGH REACTIVITY METAKAOLIN (HRM)

PRODUCER/SUPPLIER:	Advanced Cement Technologies, LLC, 435 Martin St., Suite 2040, Blaine, WA 98231
	(Contact: Ken McPhalen, Manager-Technical Services, Ph. 360-332-7060 FAX: 360-332-9321)

<u>Source</u>	Producer/ Supplier No.	Material <u>Code No.</u>	Average Specific <u>Gravity</u>
Grace Davison ^B 213 Kaolin Road Aiken, SC 29801	6206-01	37803	2.63

Notes A, B apply to the Portland Cement Concrete (BDE) special provision which includes alkali-silica reaction mitigation requirements for cast-in-place, precast, and precast prestressed concrete.

^A The average equivalent available alkali content (Na₂O + 0.658K₂O) of this high reactivity metakaolin is > 1.00%.

B The average equivalent available alkali content (Na₂O + 0.658K₂O) of this high reactivity metakaolin is ≤ 1.00%.

Bureau of Materials and Physical Research

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MICROSILICA

PRODUCER/SUPPLIER: Elkem Materials, Inc., Rt. 60, Alloy, WV 25002 (Contact: Ed A. Mays, Quality Manager, Ph: 304-779-3200 FAX: 304-779-3244)			-3244)
<u>Source</u>	Producer/ Supplier No.	Material <u>Code No.</u>	Average Specific <u>Gravity</u>
Elkem Metals Co. ^B Route 60 Alloy, WV 25002	4154-01	37852	2.12
Supplier for WV Source	Supplier No.	<u>Trade Name</u>	
Elkem Metals Co.	4154-01	EMS 970D	
Euclid Chemical Co.	614-01	Eucon MSA	
General Resource Technology	5204-01	EMS 970D	
W. R. Grace	767-01	Force 10000D	

PRODUCER/SUPPLIER:	Norchem, Inc., 985 Seaway Drive, Suite A, Fort Pierce, FL 34949
	(Contact 'Gary M. Gapinski, Technical Services and QA Manager, Ph. 772-468-6110, FAX: 772-468-8702)

<u>Source</u>	Producer/ Supplier No.	Material <u>Code No.</u>	Average Specific <u>Gravity</u>
Norchem, Inc. ^B P.O. Box 157, County Rd. 32 Beverly, OH 45715	5580-01	37852	2.25
Norchem, Inc. ^B Route 60 East Allow, WV 25002	5580-02	37852	2.20
Supplier for OH or WV Source	Supplier No.	Trade Name	
BASF	4179-04	Rheomac SF100	
Euclid Chemical Co.	614-01	Eucon MSA	
Sika Corp.	2231-01	Sikacrete 950 DP	
W. R. Grace	767-01	Force 10000D	

Notes A, B apply to the Portland Cement Concrete (BDE) special provision which includes alkali-silica reaction mitigation requirements for cast-in-place, precast, and precast prestressed concrete.

The average equivalent available alkali content (Na $_2$ O + 0.658K $_2$ O) of this microsilica is > 1.00%.

The average equivalent available alkali content (Na₂O + 0.658K₂O) of this microsilica is \leq 1.00%.

APPROVED/QUALIFIED PRODUCER LIST OF FINELY DIVIDED MINERALS June 29, 2012

This is the initial listing.

BMPR Special Provision for Shrinkage-Compensating Concrete in Bridge Deck Concrete (Effective November 28, 2011)

Current Policy Memorandum, "Acceptance Procedure for Finely Divided Minerals Used in Portland Cement Concrete and Other Applications."

DRY EXPANSIVE COMPONENT

PRODUCER/SUPPLIER:	CTS Cement Manufacturing, Inc., 11065 Knott Ave., Suite A. Cypress, CA 90630
	(Contact: Ryan Gardner, Quality Manager, Ph. 714-379-8260 FAX: 714-379-8270)

<u>Source</u>	Producer/ Supplier No.	Material <u>Code No.</u>	<u>Type</u>	Average Specific <u>Gravity</u>
CTS Cement Manufacturing,Inc. GCS Cementos, S.A. de C.V. 5 KM AL PONIENTE DEL AEROPUERTO FEDERAL COL CEMENTERA	4894-02	37810	К	2.85

JUAREZ CHIHUAHUA

Finely Divided Minerals Used in Portland Cement Concrete and Other Applications Submittal for Testing and Approval

Effective: July 27, 2007 Revised: May 22, 2015

A. Scope

The following guidelines are provided to clarify the submittal requirements and expedite the process for approving finely divided minerals according to the Department's current Standard Specifications for Road and Bridge Construction¹, 2015 Supplemental Specifications and Recurring Special Provisions², and Shrinkage-Compensating Concrete in Bridge Deck Concrete (BMPR), and current policy memorandum "Acceptance Procedure for Finely Divided Minerals Used in Portland Cement Concrete and Other Applications" ³.

B. Procedure

When submitting finely divided minerals to the Department, the following shall be included:

For **Approved Sources** (approved by the Bureau to ship a finely divided mineral for immediate use on Department projects), refer to Section 4 of the policy memorandum.

For **Unapproved Sources** (ships a finely divided mineral which must be sampled, tested, and approved by the Bureau before it is used on Department projects), refer to Section 5 of the policy memorandum. An unapproved source is not permitted for dry expansive component.

In addition to the requirements of the policy memorandum, the following shall be included:

- A signed letter stating the subject material will not be changed without written notification to the Department,
- · Contact person's name, title, address, email address, and phone number, and
- Acknowledgement by Company (see next page).

The manufacturer shall submit a minimum 3 kg (6 lb.) sample of the subject material.

The sample and submittal information shall be sent to:

Brian Lokaitis
Illinois Department of Transportation
Bureau of Materials & Physical Research
126 East Ash Street
Springfield, IL 62704-4766

Any sample provided without the required information listed will not be tested. Any changes outside the manufacturer's original parameters will necessitate a new sample submittal. Additional sample submittals shall be according to the policy memorandum.

The manufacturer will be notified when the sample testing is complete. For questions regarding the testing and approval process, contact Brian Lokaitis at 217-782-4028.

http://www.idot.illinois.gov/Assets/uploads/files/Doing-Business/Manuals-Guides-&-Handbooks/Highways/Construction/Standard-Specifications/12SpecBook.pdf
http://www.idot.illinois.gov/Assets/uploads/files/Doing-Business/Manuals-Guides-&-Handbooks/Highways/Construction/Supplemental-Standards-Specifications/2015Supp.pdf
http://www.idot.illinois.gov/Assets/uploads/files/Doing-Business/Memorandums-&-Letters/Highways/Materials/Cement/18-08.1finelydividedminerals.pdf

Finely Divided Minerals Used in Portland Cement Concrete and Other Applications Submittal for Testing and/or Approval

Effective: July 27, 2007 Revised: May 22, 2015

Instructions for Acknowledgement by Company:

The owner, partner, or corporate officer shall complete the following and return a signed and dated copy with the product submittal or recertification.

_desires to obtain advance approval of materials to be

,	supplied to Department of Transportation contractors as more fully described herein. I					
and(Insert	andunderstand that the Department of Transportation					
,	reserves the right in its contracts to approve materials at the source of supply as					
provided in Article	provided in Article 106.01 of the Standard Specifications for Road and Bridge					
Construction. I andfurther understand that approval						
company supplied	company supplied material pursuant to this request does not constitute a contract to					
supply material to	supply material to the State of Illinois or any of its contractors, and that the Department					
of Transportation	does not assure o	r guarantee that any	materials approved hereunder			
will be supplied to	the State or any o	of its contractors. In	consideration of approval, I and			
(Insert name	of company)	agree to the terms, c	conditions and performance			
standards of the	Standard Specifica	tions for Road and B	ridge Construction.			
Type of Company:	Individual □	Partnership □	Corporation □			
Company Name						
Printed Name						
T TIME TAIME						
Signature						
Signature						
Signature						