

**GENERAL PERMIT G50 MODIFICATION  
ELKINS READY-MIX CONCRETE FACILITY  
REGISTRATION G50-A027**

*Prepared for:*

**Central Supply Company of West Virginia**

4923 Benedum Drive  
Bridgeport, West, Virginia 26330

*Prepared by:*

**Potesta & Associates, Inc.**

7012 MacCorkle Avenue, SE  
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Project No. 0101-16-0236

August 2016

**POTESTA**

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## **SECTION 1**

### **GENERAL INFORMATION**



WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF AIR QUALITY  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
Phone: (304) 926-0475 • [www.dep.wv.gov/daq](http://www.dep.wv.gov/daq)

**APPLICATION FOR GENERAL  
PERMIT REGISTRATION**  
*CONSTRUCT, MODIFY, RELOCATE OR  
ADMINISTRATIVELY UPDATE*  
**A STATIONARY SOURCE OF AIR POLLUTANTS**

☐ CONSTRUCTION    ☐ MODIFICATION    ☒ RELOCATION    ☐ CLASS I ADMINISTRATIVE UPDATE  
☐ CLASS II ADMINISTRATIVE UPDATE

**CHECK WHICH TYPE OF GENERAL PERMIT REGISTRATION YOU ARE APPLYING FOR:**

- |   |  |
|---|--|
| <input type="checkbox"/> <b>G10-D</b> – Coal Preparation and Handling                                   | <input type="checkbox"/> <b>G40-C</b> – Nonmetallic Minerals Processing                  |
| <input type="checkbox"/> <b>G20-B</b> – Hot Mix Asphalt   | <input checked="" type="checkbox"/> <b>G50-B</b> – Concrete Batch                        |
| <input type="checkbox"/> <b>G30-D</b> – Natural Gas Compressor Stations                                 | <input type="checkbox"/> <b>G60-C</b> – Class II Emergency Generator                     |
| <input type="checkbox"/> <b>G33-A</b> – Spark Ignition Internal Combustion Engines                      | <input type="checkbox"/> <b>G65-C</b> – Class I Emergency Generator                      |
| <input type="checkbox"/> <b>G35-A</b> – Natural Gas Compressor Stations (Flare/Glycol Dehydration Unit) | <input type="checkbox"/> <b>G70-A</b> – Class II Oil and Natural Gas Production Facility |

**SECTION I. GENERAL INFORMATION**

1. Name of applicant (as registered with the WV Secretary of State's Office): Central Supply Company of West Virginia	2. Federal Employer ID No. (FEIN): 55-0402911
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3. Applicant's mailing address: Central Supply Company of West Virginia 4923 Benedum Drive Bridgeport, West Virginia 26330	4. Applicant's physical address: Old Route 219 Elkins, West Virginia
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5. If applicant is a subsidiary corporation, please provide the name of parent corporation: NA

6. **WV BUSINESS REGISTRATION.** Is the applicant a resident of the State of West Virginia? ☒ **YES**    ☐ **NO**

⇒ IF **YES**, provide a copy of the Certificate of **Incorporation/ Organization / Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A**.

⇒ IF **NO**, provide a copy of the **Certificate of Authority / Authority of LLC / Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A**.

**SECTION II. FACILITY INFORMATION**

7. Type of plant or facility (stationary source) to be constructed, modified, relocated or administratively updated (e.g., coal preparation plant, primary crusher, etc.): Slag silo at concrete plant	8a. Standard Industrial Classification Classification (SIC) code: 3273	AND	8b. North American Industry System (NAICS) code: 327320
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9. DAQ Plant ID No. (for existing facilities only):  083-00106	10. List all current 45CSR13 and other General Permit numbers associated with this process (for existing facilities only):  General Permit G50-A027
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**A: PRIMARY OPERATING SITE INFORMATION**

11A. Facility name of primary operating site:  Elkins Ready-Mix Concrete Plant	12A. Address of primary operating site:  Mailing: See Box 3   Physical: See Box 4	
13A. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? <span style="float: right;"><input checked="" type="checkbox"/> YES   <input type="checkbox"/> NO</span> ⇒ IF YES, please explain: Applicant owns site.  ⇒ IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.		
14A. ⇒ For <b>Modifications or Administrative Updates</b> at an existing facility, please provide directions to the present location of the facility from the nearest state road; ⇒ For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a <b>MAP as Attachment F.</b>  Take Elkins Exit off of 48, turn right, travel approximately 0.4 mile and turn left onto Old Route 219. The facility is located on the right side of the road approximately 0.8 miles.		
15A. Nearest city or town:  Elkins	16A. County:  Randolph	17A. UTM Coordinates:  Northing (KM): 4,312.596 Easting (KM): 599.901 Zone: 17
18A. Briefly describe the proposed new operation or change (s) to the facility:  One compartment slag silo and a screw conveyer installation.		19A. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits):  Latitude: 38.956632 Longitude: -79.847019

**B: 1<sup>ST</sup> ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits) NOT APPLICABLE**

11B. Name of 1 <sup>st</sup> alternate operating site:  _____  _____	12B. Address of 1 <sup>st</sup> alternate operating site:  Mailing: _____ Physical: _____  _____
13B. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? <span style="float: right;"><input type="checkbox"/> YES   <input type="checkbox"/> NO</span> ⇒ IF YES, please explain: _____  _____	
⇒ IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.	

15B. Nearest city or town:	16B. County:	17B. UTM Coordinates: Northing (KM): _____ Easting (KM): _____ Zone: _____
18B. Briefly describe the proposed new operation or change (s) to the facility:		19B. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: _____ Longitude: _____

**C: 2<sup>ND</sup> ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits): NOT APPLICABLE**

11C. Name of 2 <sup>nd</sup> alternate operating site: _____ _____	12C. Address of 2 <sup>nd</sup> alternate operating site: Mailing: _____ Physical: _____ _____
--	--

13C. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? ☐ YES ☐ NO

⇒ IF YES, please explain: \_\_\_\_\_

⇒ IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.

14C. ⇒ For **Modifications or Administrative Updates** at an existing facility, please provide directions to the present location of the facility from the nearest state road;

⇒ For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a **MAP as Attachment F**.

\_\_\_\_\_

\_\_\_\_\_

15C. Nearest city or town:	16C. County:	17C. UTM Coordinates: Northing (KM): _____ Easting (KM): _____ Zone: _____
18C. Briefly describe the proposed new operation or change (s) to the facility:		19C. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: _____ Longitude: _____

20. Provide the date of anticipated installation or change: <u>09/19/2016</u> ■ If this is an <b>After-The-Fact</b> permit application, provide the date upon which the proposed change did happen: : ____/____/____	21. Date of anticipated Start-up if registration is granted: <u>09/26/2016</u>
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22. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application if other than 8760 hours/year. (Note: anything other than 24/7/52 may result in a restriction to the facility's operation).

Hours per day 24 Days per week 7 Weeks per year 52 Percentage of operation 100

### SECTION III. ATTACHMENTS AND SUPPORTING DOCUMENTS

23. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

24. Include a **Table of Contents** as the first page of your application package.

All of the required forms and additional information can be found under the Permitting Section (General Permits) of DAQ's website, or requested by phone.

25. Please check all attachments included with this permit application. Please refer to the appropriate reference document for an explanation of the attachments listed below.

- ☒ ATTACHMENT A : CURRENT BUSINESS CERTIFICATE
- ☒ ATTACHMENT B: PROCESS DESCRIPTION
- ☒ ATTACHMENT C: DESCRIPTION OF FUGITIVE EMISSIONS
- ☒ ATTACHMENT D: PROCESS FLOW DIAGRAM
- ☒ ATTACHMENT E: PLOT PLAN
- ☒ ATTACHMENT F: AREA MAP
- ☒ ATTACHMENT G: EQUIPMENT DATA SHEETS AND REGISTRATION SECTION APPLICABILITY FORM
- ☒ ATTACHMENT H: AIR POLLUTION CONTROL DEVICE SHEETS
- ☒ ATTACHMENT I: EMISSIONS CALCULATIONS
- ☒ ATTACHMENT J: CLASS I LEGAL ADVERTISEMENT
- ☒ ATTACHMENT K: ELECTRONIC SUBMITTAL
- ☒ ATTACHMENT L: GENERAL PERMIT REGISTRATION APPLICATION FEE
- ☐ ATTACHMENT M: SITING CRITERIA WAIVER
- ☒ ATTACHMENT N: MATERIAL SAFETY DATA SHEETS (MSDS)
- ☒ ATTACHMENT O: EMISSIONS SUMMARY SHEETS
- ☒ OTHER SUPPORTING DOCUMENTATION NOT DESCRIBED ABOVE (Equipment Drawings, Aggregation Discussion, etc.)

Please mail an original and two copies of the complete General Permit Registration Application with the signature(s) to the DAQ Permitting Section, at the address shown on the front page of this application. Please DO NOT fax permit applications. For questions regarding applications or West Virginia Air Pollution Rules and Regulations, please refer to the website shown on the front page of the application or call the phone number also provided on the front page of the application.

#### SECTION IV. CERTIFICATION OF INFORMATION

This General Permit Registration Application shall be signed below by a Responsible Official. A Responsible Official is a President, Vice President, Secretary, Treasurer, General Partner, General Manager, a member of a Board of Directors, or Owner, depending on business structure. A business may certify an Authorized Representative who shall have authority to bind the Corporation, Partnership, Limited Liability Company, Association, Joint Venture or Sole Proprietorship. Required records of daily throughput, hours of operation and maintenance, general correspondence, Emission Inventory, Certified Emission Statement, compliance certifications and all required notifications must be signed by a Responsible Official or an Authorized Representative. If a business wishes to certify an Authorized Representative, the official agreement below shall be checked off and the appropriate names and signatures entered. Any administratively incomplete or improperly signed or unsigned Registration Application will be returned to the applicant.

FOR A CORPORATION (domestic or foreign)

- ☒ I certify that I am a President, Vice President, Secretary, Treasurer or in charge of a principal business function of the corporation

FOR A PARTNERSHIP

- ☐ I certify that I am a General Partner

FOR A LIMITED LIABILITY COMPANY

- ☐ I certify that I am a General Partner or General Manager

FOR AN ASSOCIATION

- ☐ I certify that I am the President or a member of the Board of Directors

FOR A JOINT VENTURE

- ☐ I certify that I am the President, General Partner or General Manager

FOR A SOLE PROPRIETORSHIP

- ☐ I certify that I am the Owner and Proprietor

- ☐ I hereby certify that (please print or type) \_\_\_\_\_

*is an Authorized Representative and in that capacity shall represent the interest of the business (e.g., Corporation, Partnership, Limited Liability Company, Association Joint Venture or Sole Proprietorship) and may obligate and legally bind the business. If the business changes its Authorized Representative, a Responsible Official shall notify the Director of the Office of Air Quality immediately, and/or,*

*I hereby certify that all information contained in this General Permit Registration Application and any supporting documents appended hereto is, to the best of my knowledge, true, accurate and complete, and that all reasonable efforts have been made to provide the most comprehensive information possible*

Signature \_\_\_\_\_

(please use blue ink)

Responsible Official

Date

Name & Title Dwayne McCartney, President

(please print or type)

Signature \_\_\_\_\_

(please use blue ink)

Authorized Representative (if applicable)

Date

Applicant's Name Central Supply Company of West Virginia

Phone & Fax (304) 592-5577

Phone

(304) 592-5546

Fax

Email jdmccartney@centralsupplywv.com



**ATTACHMENT A**  
**CURRENT BUSINESS CERTIFICATE**

**WEST VIRGINIA  
STATE TAX DEPARTMENT  
BUSINESS REGISTRATION  
CERTIFICATE**

ISSUED TO:  
**CENTRAL SUPPLY COMPANY OF WEST VIRGINIA  
4923 BENEDUM DR  
BRIDGEPORT, WV 26330-7174**

**BUSINESS REGISTRATION ACCOUNT NUMBER: 1034-6341**

This certificate is issued on: **09/15/2015**

*This certificate is issued by  
the West Virginia State Tax Commissioner  
in accordance with Chapter 11, Article 12, of the West Virginia Code*

*The person or organization identified on this certificate is registered  
to conduct business in the State of West Virginia at the location above.*

**This certificate is not transferrable and must be displayed at the location for which issued**

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.  
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.

**ATTACHMENT B**  
**PROCESS DESCRIPTION**

## **ATTACHMENT B**

### **PROCESS DESCRIPTION**

Central Supply Company of West Virginia operates a Concrete Ready Mix facility located near Elkins in Randolph County. This plant can produce 120 cubic yards (CY) per hour and 240,000 cubic yards per year of concrete. This revision is for the addition of a new silo (CS-3) for storage of slag to be used along with cement and flyash in the concrete mixture.

Cement and flyash are stored in silos (CS-1) and CS-2). Silos are controlled by filter vents (APCD-1 and APCD-2). Cement and flyash are transferred separately to storage silos by a pneumatic truck. A silo (CS-3) for storing slag will be transferred from the Saltwell Concrete Plant to the Elkins Concrete Batch Plant. This one compartment silo is controlled by a filter vent (APCD-4) and the slag is fed pneumatically into the silo.

Trucks drop aggregates and sand into two separate piles in three sided enclosures (E3-1 and E3-2). An endloader transfers sand or aggregate and drops the material into a hopper bin. The hopper bin drops the material onto a stationary conveyor stacker (SS).

The stationary conveyor stacker drops material into a stacking tube (ST) which in turn passes the material to the Aggregate Batcher. The Aggregate Batcher drops material onto a second stationary conveyor/stacker which conveys material into the telescopic chute.

A pneumatic truck loads flyash, cement and slag separately into silos. Filter vents attached to each silo control particulate matter emissions from the silos during loading. Materials from the silos are transferred to the cement/flyash batcher (CS-2 and CS-3 contents are transferred to screw conveyors) which is controlled by APCD-3 and dropped into the telescopic chute where they are mixed with water and sand or aggregates. Materials in the telescopic chute are dropped into a mixer truck.

## **ATTACHMENT C**

### **DESCRIPTION OF FUGITIVE EMISSIONS**

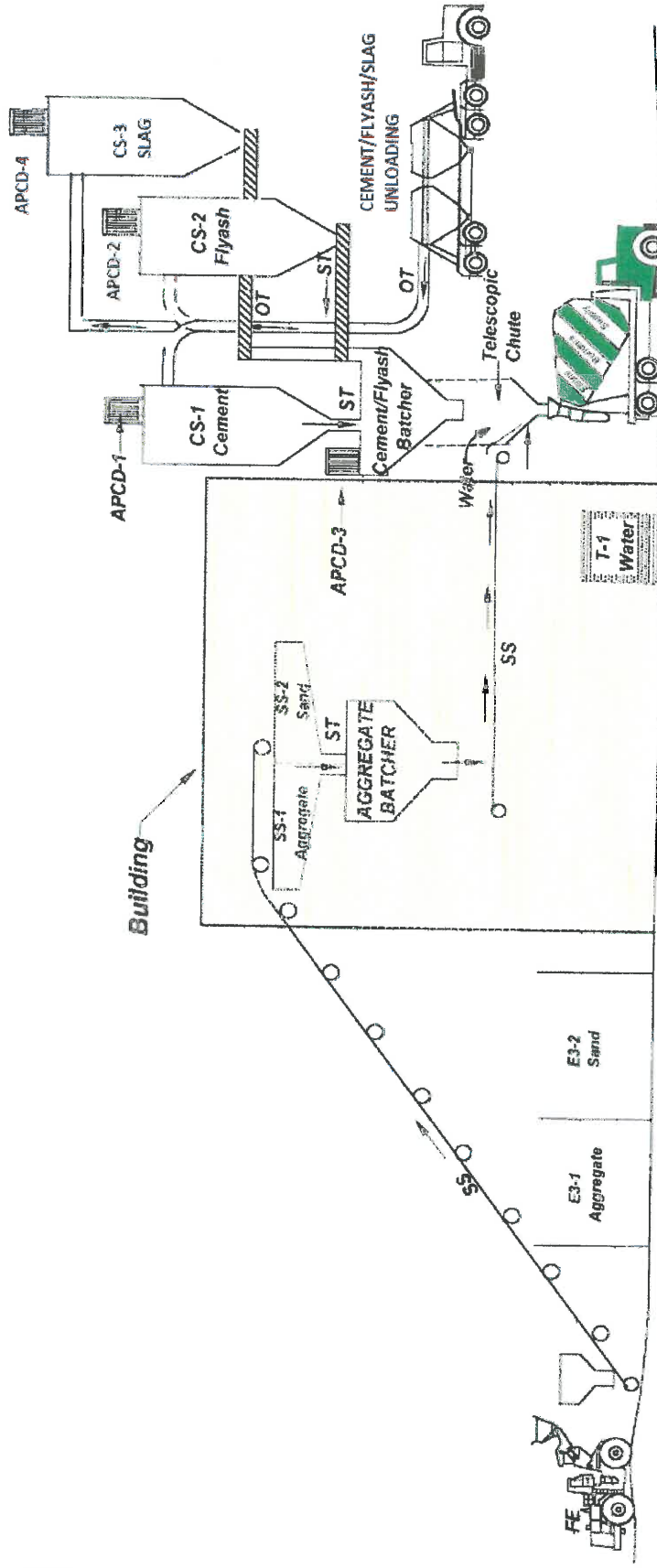
## **ATTACHMENT C**

### **DESCRIPTION OF FUGITIVE EMISSIONS**

Sources of fugitive emissions (particulate matter) are sand and aggregate stockpiles and gravel haulroads. Stockpiles of sand and aggregates are kept inside three-sided structures on a concrete slab. A water spray system is utilized to maintain a moisture level sufficient to prevent airborne particles. Haulroads are wetted with a water truck.

**ATTACHMENT D**

**PROCESS FLOW DIAGRAM**



Based on Process Flow  
Diagram Prepared by Swecker  
Engineering & Surveying  
Dated January 25, 2003

NOTE: Pneumatic Truck  
Unloading to Silos Through  
Specific Silo Dedicated Lines.

7012 MacCorkle Avenue, S.E.  
Charleston, West Virginia 25304  
Phone: (304) 342-1400  
Fax: (304) 343-9031

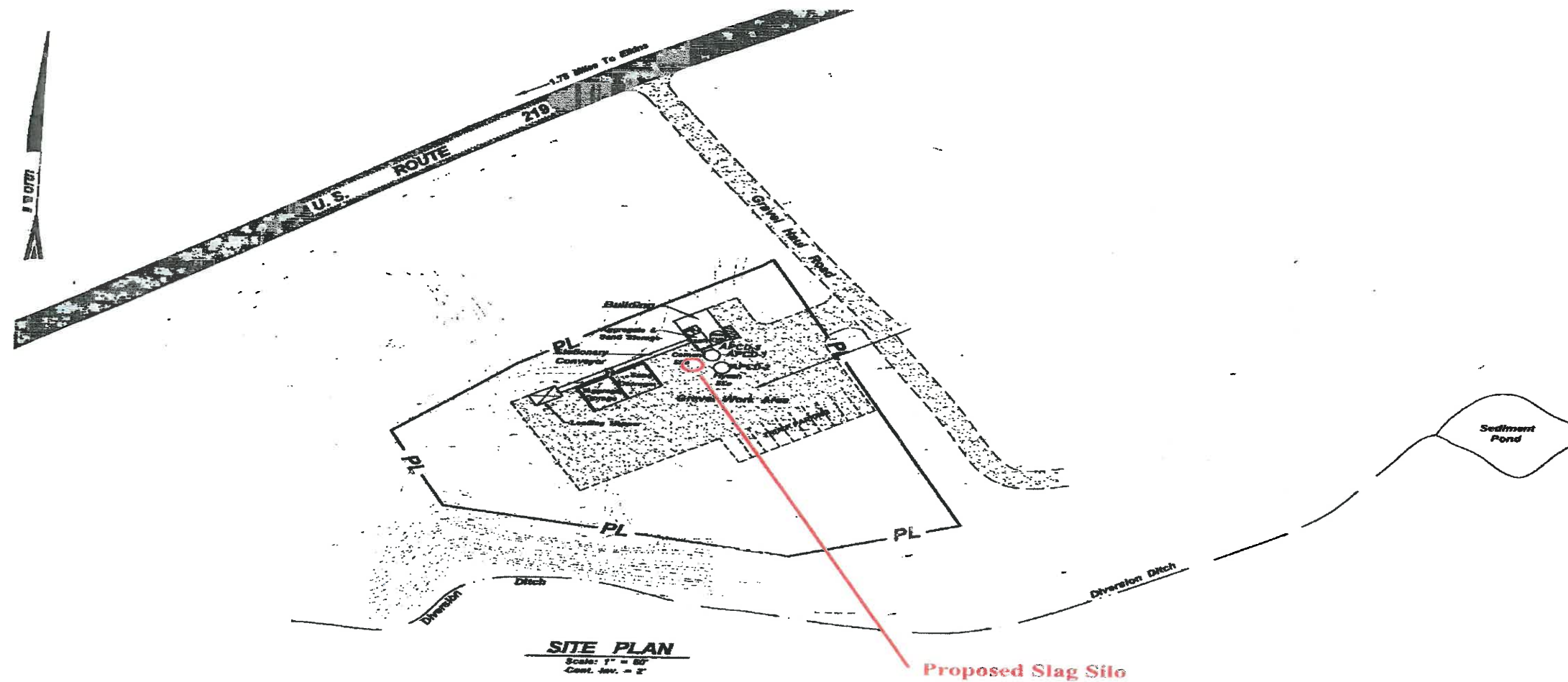


**Central Supply Company of West Virginia**  
**Elkins Ready-Mix Concrete Plant**  
Randolph County, West Virginia  
Project No. 0101-16-0236



**ATTACHMENT E**

**PLOT PLAN**



NOTE: Information in Red  
added by Potesta & Associates,  
Inc. for air permitting purposes.

Based on Site Plan Prepared by  
Swecker Engineering & Surveying  
Dated January 23, 2003



7012 MacCorkle Avenue, S.E  
Charleston, West Virginia 25304  
Phone: (304) 342-1400  
Fax: (304) 343-9031

**Central Supply Company of West Virginia**  
**Elkins Ready-Mix Concrete Plant**  
Randolph County, West Virginia  
Project No. 0101-16-0236

**ATTACHMENT F**

**AREA MAP**



7012 MacCorkle Avenue, S.E  
Charleston, West Virginia 25304  
Phone: (304) 342-1400  
Fax: (304) 343-9031

**Central Supply Company of West Virginia**  
**Elkins Ready-Mix Concrete Plant**  
Randolph County, West Virginia  
Project No. 0101-16-0236

**ATTACHMENT G**

**EQUIPMENT DATA SHEETS**

## CBP PRODUCTION AFFECTED SOURCE SHEET

CBP Production Information	Source Identification Number <sup>1</sup>	CBD-1	
	Manufacturer & Model Number	McNeilus Truck	
	Date of Manufacture	1999	
	Maximum Design Production Rate <sup>2</sup>	120	CY/HR
	Maximum Annual Production <sup>3</sup>	240,000	CY
	Daily Operation	24	hours/day
	Annual Operation	365	days/year
		8,760	hours/year
	Approximate Percentage of Operation from:	25	Jan - Mar
		25	April - June
		25	July - Sept
		25	Oct - Dec

1. Enter the appropriate Source Identification Number for each concrete batch plant production weigh hopper or central mixer. Batch plant weigh hopper should be designated WH-1, WH-2, etc. Batch plant central mixer should be designated CM-1, CM-2, etc.
2. Enter the manufacturer's Maximum Design Production Rate of the concrete batch plant production equipment. Specify units in tons/hour.
3. Enter the Maximum Annual Production of the concrete batch plant. Specify units of cubic yards per year or tons per year. To calculate Maximum Annual Production, multiply the Maximum Design Production Rate (tons/hr) by the Annual Operation (hrs/yr).

## CBP MATERIAL STORAGE & HANDLING AFFECTED SOURCE SHEET

Source Identification Number <sup>1</sup>	E3-1	E3-2	SS-1	SS-2	CS-1	CS-2	CS-3
Material Stored <sup>2</sup>	Limestone Aggregate	Sand	Limestone Aggregate	Sand	Cement	Flyash	Slag
Maximum Yearly Throughput (tons/year) <sup>3</sup>	210,000	147,600	210,000	147,600	64,800	7,200	14,400
Typical Moisture Content (%) <sup>4</sup>	2	2	2	2	0	0	<1%
Average % of Material Passing Through 200 Mesh Sieve <sup>5</sup>	5	5	5	5	25	25	25
Maximum Stockpile Base Area (ft <sup>2</sup> ) <sup>6</sup>	900	900	176.4	88.2	NA	NA	NA
Maximum Stockpile Height (ft) <sup>7</sup>	10	10	9.6	9.6	NA	NA	NA
Maximum Storage Capacity (tons) <sup>8</sup>	250	250	88	44	200	130	50
Dust Control Method Applied to Storage <sup>9</sup>	WS	WS	FE	FE	FE	FE	FE
Method of Material Load-in to Bin or Stockpile <sup>10</sup>	FE	FE	SS	SS	OT	OT	OT
Dust Control Method Applied During Load-in <sup>11</sup>	WS/MD	WS/MD	WS	WS	FE	FE	FE
Method of Material Load-out from Bin or Stockpile <sup>10</sup>	FE	FE	SS	SS	ST	ST	ST
Dust Control Method Applied During Load-out <sup>11</sup>	WS/MD	WS/MD	FE	FE	FE	FE	FE

1. Enter the appropriate Source Identification Number for each storage activity using the following codes. For example, if the facility utilizes four open stockpiles and one storage silo, the Source Identification Numbers should be OS-1, OS-2, OS-3, and OS-4; and BS-1, respectively.

OS Open Stockpile E3 Enclosure (three-sided enclosure)  
BS Bin or Storage Silo (full enclosure) SB Storage Building (full enclosure)  
SF Stockpiles with wind fences OT Other (please specify)

2. Describe the type of material stored or stockpiled.

3. Enter the maximum yearly storage throughput for each storage activity.

4. Enter the average percent moisture content of the stored material.

5. Enter the average percent of material that will pass through a 200 mesh sieve.

6. For stockpiles, enter the maximum stockpile base area.

7. For stockpiles, enter the maximum stockpile height.

8. Enter the maximum storage capacity for each storage activity in tons (e.g. silo capacity, maximum stockpile size, etc.).

9. Enter the dust control method applied to storage activity using the following codes:

CA Crusting Agent WS Water Spray  
FE Full Enclosure NO None  
OT Other (please specify)

10. Enter the method of load-in or load-out to/from stockpiles or bins using the following codes:

FE Front Endloader SS Stationary Conveyor/Stacker  
ST Stacking Tube MC Mobile Conveyor/Stacker  
CS Clamshell TD Truck Dump  
OT Other (please specify)

11. Enter the dust control method applied during load-in or load-out using the following codes:

CA Crusting Agent WS Water Spray  
FE Full Enclosure MD Minimize Drop Height  
ST Stacking Tube NO None  
OT Other (please specify)



## CBP FUGITIVE DUST CONTROL SYSTEM AFFECTED SOURCE SHEET

Fugitive Dust Control System Data	Fugitive Dust Control Method <sup>1</sup>	WT/WS
	Design Water Flow Rate (gpm) <sup>2</sup>	50 GPM WT/5 GPM WS
	Chemical Additive <sup>3</sup>	None
	Water/Additive Mix Ratio <sup>4</sup>	None
	Amount (gal/yd) <sup>5</sup>	As Necessary
	Frequency of Application <sup>6</sup>	As Necessary
	Haulroad Surface <sup>7</sup>	Gravel
	Work/Storage Area Surface <sup>8</sup>	Concrete & Gravel
	Haulroad Length <sup>9</sup>	700 Ft.
	Number of Vehicles per day <sup>10</sup>	160
	Number of Wheels per Vehicle <sup>11</sup>	10
	Weight of Vehicle (tons) <sup>12</sup>	28 Tons

1. Enter the fugitive dust control method(s) using the following codes:

WT Water Truck                      WS Fixed Water Sprays  
 UW Underbody Truck Wash      RS Rumble Strips  
 OT Other \_\_\_\_\_ (please specify)

2. Enter the design water flow rate for the water truck or fixed water sprays in gallons per minute.

3. Enter manufacturer and type, specification or grade of chemical additive.

4. Enter the water/chemical additive mix ratio.

5. Enter the amount of water or water/chemical additive mix to be applied to haulroads, storage and work areas in gallons per square yard.

6. Enter the frequency of application of water/chemical additive mix to haulroads, storage and work areas during periods of dry weather.

7. Enter the type of haulroad, work and storage area surface (asphalt pavement, concrete, dirt, coarse gravel, reddog, etc.).

8. Enter the approximate length of haulroad(s) in miles or feet. List appropriate units.

9. Enter the maximum daily vehicle traffic (trucks per day).

10. Enter the maximum number of wheels per vehicle.

11. Enter the mean vehicle weight in tons.

12. Complete a separate HMA Plant Fugitive Dust Control System Data sheet for each fugitive dust control system.

**Provide a written description of the concrete batch plant's particulate matter capture system below:**

Stockpiles will be kept inside a three-sided structure on a concrete slab. A water spray system will be utilized to maintain a moisture level to prevent airborne particles. Haulroad will be wetted with a water truck as conditions require.



[illegible]

1. Enter the appropriate Source Identification Number for each storage tank located at the concrete batch plant.  
Storage tanks should be designated T-1, T-2, T-3, etc.
2. Enter storage tank content (#2 fuel oil, asphaltic cement, water, etc.)
3. Enter storage tank length in feet.
4. Enter storage tank diameter in feet.
5. Enter storage tank volume in gallons. Storage tank volume may be calculated using the following mathematical relationship:  

$$(L_{\text{tank}} \text{ ft}) \times (3.14/4) \times (d_{\text{tank}}^2 \text{ ft}^2) \times (7.48 \text{ gallons/ft}^3)$$
6. Enter storage tank throughput in gallons per year.
7. Enter storage tank orientation using the following codes:  
     VERT Vertical Tank          HORZ Horizontal Tank
8. Enter storage tank average liquid height in feet.
9. Storage tank emissions may be calculated using TANKS emission calculation program.

**ATTACHMENT H**

**AIR POLLUTION CONTROL DEVICE SHEETS**

## AIR POLLUTION CONTROL DEVICE AFFECTED SOURCE SHEET

CBP Air Pollution Control Device Data Sheet		Fabric Filter Baghouse	Fabric Filter Baghouse	Fabric Filter Baghouse	Fabric Filter Baghouse
General Information	APCD Identification Number <sup>1</sup>	APCD-1	APCD-2	APCD-3	APCD-4
	Manufacturer & Model Number	McNeilus Truck	McNeilus Truck	McNeilus Truck	WAM SILOTOP R01
	Number of Compartments	1	1	1	1
	Gas Inlet Area (ft <sup>2</sup> )				
	Gas Outlet Area (ft <sup>2</sup> )				
	Fabric Filter Cleaning Mechanism <sup>2</sup>	Shaker	Shaker	Shaker	Vibration
	Total Cloth (fabric) Area (ft <sup>2</sup> )	270	15	270	264 <sup>(5)</sup>
	Draft Fan HP				
	Outlet Stack Area (ft <sup>2</sup> )				
Operational Parameters	Minimum Design PD (in H <sub>2</sub> O)				
	Maximum Design PD (in H <sub>2</sub> O)				
	Inlet Gas Flow Rate (ACFM)				
	Inlet Gas Temperature (°F)				
	Inlet Gas Pressure (PSIA)				
	Inlet Gas Velocity (ft/sec)				
	PM Inlet Rate (grains/scf)	0.032 lbs/hr	0.032 lbs/hr	4.458 lbs/hr	125.6 lbs/hr
	PM Outlet Rate (grains/scf)	0.00032 lbs/hr	0.0032 lbs/hr	0.0458 lbs/hr	0.63 lbs/hr
	Operating Air/Cloth Ratio (ft/min)				

1. Enter the appropriate Air Pollution Control Device Identification Number for each fabric filter baghouse, filter vent or discharge sock. The devices should be designated APCD-1, APCD-2, APCD-3, etc.
2. Enter method used to clean bags: shaker, pulse jet, reverse jet or other.
3. Complete more than one CBP Air Pollution Control Device Data Sheet if necessary.
4. Enter the fractional efficiency of the fabric filter baghouse.
5. WAM ROI Manual.

## CBP PARTICULATE MATTER CAPTURE SYSTEM AFFECTED SOURCE SHEET

Pursuant to Section 2.2.4 of General Permit G50-B, the registrant shall not cause, suffer, allow, or permit any registered concrete batch plant to operate that is not equipped with an effective particulate matter capture system(s) and associated air pollution control device(s) to minimize the emission of particulate matter from production equipment, storage structures and silos. The particulate matter capture system shall ensure the lowest fugitive particulate emissions reasonably achievable.

A particulate matter capture system shall be used to confine, collect, and transport displaced particulate matter from production weigh hoppers, cement and flyash storage structures and/or silos to an air pollution control device. Particulate matter capture systems may include but not be limited to: hoods, bins, ductwork, enclosures and air pollution control devices such as fabric filter baghouses, associated fans, discharge socks and filter vents.

**Provide a written description of the concrete batch plant's particulate matter capture system below:**

Three air pollution control devices are utilized s the particulate matter capture system as well as a telescopic enclosed loading chute.

- a) APCD-1 sits on the cement storage silo (CS-1) and is a 270 square foot (SF) cloth baghouse. This baghouse operates continuously and is cleaned by shaking with all collected material falling back into CS-1.
- b) APCD-2 sits on the Flyash storage silo (CS-2) and is a 15 SF cloth baghouse. This baghouse operates continuously and is cleaned by shaking with all material falling back into CS-2.
- c) APCD-3 sits on the cement batcher and is a 270 SF cloth baghouse and is cleaned by shaking with all material collected falling into weight batcher.
- d) APCD-4 sits on the one compartment slag silo.
- e) Truck loading of cement is performed via a telescopic chute which contains the particulate to the cement batcher or truck.

**ATTACHMENT I**

**EMISSIONS CALCULATIONS**

Central Supply Company of West Virginia  
Elkins Concrete Plant

Potesta & Associates, Inc.  
Project No 0101-16-0236

By: ADM  
Date: 8/11/2016

Checked By: JJD  
Date: 08/17/2016

SLAG PTE								
Emission Type	Point Source <sup>1</sup>				Fugitive <sup>2</sup>			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
TSP	134.18	24.15	1.52	0.27	4.05	0.58	1.22	0.17
PM10	48.06	8.66	0.64	0.12	1.19	0.17	0.36	0.05
PM2.5	9.62	1.74	0.11	0.02	0.12	0.02	0.04	0.01

<sup>1</sup> Point source emissions include material handling transfer points.

<sup>2</sup> Fugitive emissions include vehicular traffic and open stockpiling.

TOTAL SLAG PTE				
Emission Type	Uncontrolled		Controlled	
	lb/hr	tons/yr	lb/hr	tons/yr
TSP	138.23	28.20	2.74	0.44
PM10	49.25	9.85	1.00	0.17
PM2.5	9.74	1.86	0.15	0.03

By: ADM  
Date: 8/11/2016

Checked By: JJD  
Date: 08/17/2016

### MATERIALS HANDLING

#### Aggregate Transfers

Defining transfer point empirical expression variables, where:

$$e = k(0.0032)(U/5)^{1.3}/(M/2)^{1.4}$$

Pneumatic emission factors

PM 3.14 AP42-11.12.2  
PM10 1.10 AP42-11.12.2

e =	SLAG	lb/ton
k for TSP =	0.74	dimensionless
k for PM <sub>10</sub>	0.35	dimensionless
k for PM <sub>2.5</sub>	0.053	dimensionless
U =	10	mean wind speed, mph
M =	0.25	material moisture content, %
Calculating transfer point emission factor for TSP:		
e =	0.1072	lb/ton
Calculating transfer point emission factor for PM <sub>10</sub> :		
e =	0.0507	lb/ton
calculation transfer point emission factor for PM <sub>2.5</sub>		
e =	0.0077	lb/ton
calculation pneumatic emission factor for PM <sub>2.5</sub>		
e =	0.2249	lb/ton

Emission factor calculation taken from AP-42 Section 13.2.4 Aggregate Handling and Storage Piles

#### PM Emissions

Rounding = 2

ID	Description	Transfer Capacities		e (U) lb/T	Control Device		Emissions			
		tons/hour	tons/year		Type	Effic(%)	Uncontrolled (lb/hr)	Controlled (tpy)	Controlled (lb/hr)	Controlled (tpy)
TP1 (1)	Truck to CS-3	40	14,400	3.14	VF	99.5	125.60	22.61	0.63	0.11
TP2 (1)	CS-3 to SC (2)	40	14,400	0.1072	FE	80	4.29	0.77	0.86	0.15
TP3 (1)	SC to CB (3)	40	14,400	0.1072	VF	99.5	4.29	0.77	0.03	0.01
Sub-total							134.18	24.15	1.52	0.27

#### PM10 Emissions

ID	Description	Transfer Capacities		e (U) lb/T	Control Device		Emissions			
		tons/hour	tons/year		Type	Effic(%)	Uncontrolled (lb/hr)	Controlled (tpy)	Controlled (lb/hr)	Controlled (tpy)
TP1 (1)	Truck to CS-3	40	14,400	1.10	VF	99.5	44.00	7.92	0.22	0.04
TP2 (1)	CS-3 to SC (2)	40	14,400	0.0507	FE	80	2.03	0.37	0.41	0.07
TP3 (1)	SC to CB (3)	40	14,400	0.0507	VF	99.5	2.03	0.37	0.01	0.01
Sub-total							48.06	8.66	0.64	0.12

#### PM2.5 Emissions

ID	Description	Transfer Capacities		e (U) lb/T	Control Device		Emissions			
		tons/hour	tons/year		Type	Effic(%)	Uncontrolled (lb/hr)	Controlled (tpy)	Controlled (lb/hr)	Controlled (tpy)
TP1 (4)	Truck to CS-3	40	14,400	0.2249	VF	99.5	9.00	1.62	0.05	0.01
TP2 (1)	CS-3 to SC (2)	40	14,400	0.0077	FE	80	0.31	0.06	0.062	0.01
TP3 (1)	SC to CB (3)	40	14,400	0.0077	VF	99.5	0.31	0.06	0.002	0.0003
Sub-total							9.62	1.74	0.11	0.02

#### Notes

1. AP42 Table 11.12-2.
2. SC = Screw
3. Cement/Flyash Batcher
4. PM<sub>2.5</sub> emission factor for pneumatic loading was estimated based on k factors from AP42-13.2.4

By: ADM  
Date: 8/11/2016

Checked By: JJD  
Date: 08/17/2016

# VEHICLE ACTIVITY (VT)

Material transported:

	Slag
TPH	50
TPY	14,400
Load Weight (tons)	25
Vehicle Weight (tons)	14
Vehicles Per Hour	2
Vehicles Per Year	576
Mean Vehicle Weight (tons)	26.5
Road Length (round trip)	0.33
Roundup to =	0

Assuming no partial loads.

## Unpaved Haulroads

Emission Factor Equation from AP-42 Section 13.2.2, Unpaved Roads (December 2003):

$$e = k (s/12)^a (W/3)^b [(365-p)/365]$$

	PM10	PM2.5	TSP	
k =	1.5	0.15	4.9	constant, AP-42 Table 13.2.2-2 (dimensionless)
s =	10	10	10	%, surface material silt content
$W_{truck}$ =	26.50	26.50	26.50	tons, mean vehicle weight
M =	0.2	0.2	0.2	% dry, surface material moisture content
a =	0.9	0.9	0.7	constant, AP-42 Table 13.2.2-2 (dimensionless)
b =	0.45	0.45	0.45	constant, AP-42 Table 13.2.2-2 (dimensionless)
p =	170	170	170	no. days/year with at least 0.01in of rain
$e_{truck}$ =	1.81	0.18	6.14	lb/VMT

Rounding to 2

## Trucks

Pollutant	No. of Vehicles		Miles Per Trip (mi)	Control Device Type	Effic(%)	Emissions			
	Per Hour	Per Year				Uncontrolled (lb/hr)	(tpy)	Controlled (lb/hr)	(tpy)
TSP	2	576	0.33	WT	70	4.05	0.58	1.22	0.17
PM10	2	576	0.33	WT	70	1.19	0.17	0.36	0.05
PM2.5	2	576	0.33	WT	70	0.12	0.02	0.04	0.01



**ATTACHMENT J**

**CLASS I LEGAL ADVERTISEMENT**

## **ATTACHMENT J**

### **AIR QUALITY PERMIT NOTICE**

#### **Notice of Application**

Notice is given that Central Supply Company of West Virginia has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a General Permit G50-A Class II Administrative Update to transfer a slag silo from Saltwell Concrete Facility to their Concrete Batch plant located on Route 219, 1.75 miles north from the Intersection of US 33/250 in the City of Elkins, Randolph County, West Virginia. The latitude and longitude coordinates are: 38.956632 and -79.847019.

The applicant estimates the potential to discharge the following Regulated Air Pollutants from the slag silo will be: PM of 0.27 tons per year (tpy); PM10 of 0.12 tpy; and PM2.5 of 0.02 and fugitive emissions: PM of 0.17 tpy; PM10 of 0.05 tpy; and PM2.5 of 0.01 tpy.

Startup of operation is planned to begin on or about the 26<sup>th</sup> day of September, 2016. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57<sup>th</sup> Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, Extension 1250, during normal business hours.

Dated this the **(PLEASE INSERT DAY)** day of August, 2016.

By: Central Supply Company of West Virginia  
Dwayne McCartney  
President  
4923 Benedum Drive  
Bridgeport, West Virginia 26330

**ATTACHMENT K**  
**ELECTRONIC SUBMITTAL**

**ATTACHMENT L**

**GENERAL PERMIT REGISTRATION  
APPLICATION FEE**

WV DEP - DAQ

**THE CENTRAL SUPPLY COMPANY**  
TRANSIT MIXED CONCRETE CONSTRUCTION MATERIALS

MEMO	INVOICE DATE	INVOICE NUMBER	AMOUNT	DISCOUNT	NET AMOUNT
Silo Relocation Saltwell Block ↓ Elkins Batch	8/25/16	8252016	500.00	0.00	500.00

P.O. Box 968 CLARKSBURG, WEST VIRGINIA 26302  
OFFICE (304) 592-5577 PLEASE DETACH BEFORE DEPOSITING FAX (304) 592-5530

17919

PLEASE DETACH BEFORE DEPOSITING



Transit Mixed Concrete  
Construction Materials

**THE CENTRAL SUPPLY COMPANY**

P.O. Box 968  
Clarksburg, West Virginia 26302  
(304) 592-5577 Fax (304) 592-5530

**You No. 17919**

69-459  
515

DATE

CHECK NO.

AMOUNT

8/25/16

17919

\$ 500.00

Pay Exactly Five Hundred Dollars and 00/100

WV DEP - DAQ

THE CENTRAL SUPPLY COMPANY

PAY  
TO THE  
ORDER  
OF

*Todd Keplinger*  
AUTHORIZED SIGNATURE

⑈017919⑈ ⑆051504597⑆

⑈0019526⑈

**ATTACHMENT N**

**MATERIAL SAFETY DATA SHEETS**

# Safety Data Sheet - Slag Cement

## Section 1. Identification

GHS product identifier:	Ground granulated blast furnace slag cement
Chemical name:	Calcium compounds, calcium silicate compounds, and other calcium compounds containing iron and aluminum make up the majority of this product.
Other means of identification:	Ground Granulated Blast Furnace Slag Cement, Ground Granulated Iron Blast Furnace Slag Cement, Blast Furnace Slag Cement, Iron Slag Cement, Pig Iron Slag Cement, Water Granulated Ground Blast Furnace Slag Cement Covers Products: i.tech SLAG
Relevant identified uses of the substance or mixture and uses advised against:	Building materials, construction, a basic ingredient in concrete.
Supplier's details:	3251 Bath Pike • Nazareth, PA 18064 • 800-437-7762 • <a href="http://essroc.com">essroc.com</a> • <a href="mailto:us.i-nova.net">us.i-nova.net</a> County Road 49, Picton, ON. K0K 2T0 • <a href="http://essroc.com">essroc.com</a> • <a href="mailto:us.i-nova.net">us.i-nova.net</a>
Emergency telephone number (24-hour emergency information)	800-424-9300 Chemtrec

## Section 2. Hazards Identification

**DANGER!** Overexposure to slag cement can cause serious, potentially irreversible skin or eye damage in the form of chemical (caustic) burns, including third degree burns. The same serious injury can occur if wet or moist skin has prolonged contact exposure to dry slag cement.

Slag cement is not classifiable as a human carcinogen.

OSHA/HCS status:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Canadian (WHMIS):	Slag cement products are considered to be hazardous materials under the Hazardous Products Act as defined by the Controlled Products Regulations (CPR).
Classification of the substance or mixture:	SKIN CORROSION/IRRITATION — Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION — Category 1 SKIN SENSITIZATION — Category 1 CARCINOGENICITY/INHALATION — Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] — Category 3

### Product label elements

Hazard pictograms:



Signal word:

**Danger**

Hazard statements:

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

May cause respiratory irritation.

May cause cancer.

### Precautionary statements

Prevention:

Wear protective gloves. Wear eye or face protection. Use only outdoors or in a well-ventilated area. Avoid breathing dust. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Causes eye and skin burns. See Section 4 for additional details. May present risk of engulfment. See Section 7 for additional details. Overexposure to wet cement can cause severe skin damage in the form of chemical burns, including third degree burns. The same severe injury can occur if wet or moist skin is exposed to dry slag cement. Clothing wet with moisture from cement can transmit the caustic effects to the skin, causing chemical burns. Slag cement causes skin burns with little warning; discomfort or pain cannot be relied upon to alert a person to a serious injury. You may not feel pain or the severity of the burn until hours after the exposure.

**MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY EXPOSURE:** Contact with wet cement may aggravate existing skin conditions. Sensitivity to hexavalent chromium can be aggravated by exposure.

Response:

**IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Prolonged and repeated inhalation of respirable crystalline silica-containing dust in excess of appropriate exposure limits has caused silicosis, fibrosis or scar tissue formations in the lungs. Call a POISON CENTER or physician if you feel unwell. **IF ON SKIN:** Wash with plenty of pH neutral soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: get medical attention. Slag cement may contain trace amounts of hexavalent chromium. Hexavalent chromium is associated with allergic skin reactions which may appear as contact dermatitis and skin ulcerations. Persons already sensitized may react to their first exposure to cement. Other individuals may develop allergic dermatitis after repeated exposure to cement. The symptoms of allergic reactions may include reddening of the skin, rash, and irritation. Symptoms of chronic exposure to wet cement may include reddening, irritation, and eczematous rashes. Drying, thickening, and cracking of the skin and nails may also occur. **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Exposure to dust may cause immediate or delayed irritation or inflammation. Eye contact by larger amount of dry power or splashes of wet portland cement may cause effects ranging from moderate eye irritation to chemical burns or blindness. Immediately call a POISON CENTER or physician. **IF INGESTED:** Irritating to mouth, throat and stomach. Ingestion of large quantities may cause severe irritation and chemical burns of the mouth, throat, stomach and digestive tract. Do not ingest slag cement. Get immediate medical attention.

Storage:

Keep container tightly closed in a dry and well-ventilated area.

Disposal:

Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified:

Not applicable.

## Section 3. Composition/information on ingredients

Substance/mixture:

Mixture

Chemical name:

Calcium compounds, calcium silicate compounds, and other calcium compounds containing iron and aluminum make up the majority of this product.

Other means of identification:

Ground Granulated Blast Furnace Slag Cement, Ground Granulated Iron Blast Furnace Slag Cement, Blast Furnace Slag Cement, Iron Slag Cement, Pig Iron Slag Cement, Water Granulated Ground Blast Furnace Slag Cement



## CAS number/other identifiers

CAS number: 65996-69-2  
 Product code: Not available.

Ingredient name	%	CAS number
Granulated blast furnace slag	100	65996-69-2
The structure of slag cement may contain the following in some concentration ranges:		
Calcium oxide	30 - 40	1305-78-8
Magnesium oxide	8 - 15	1309-48-4
Quartz	< .4	14808-60-7
Hexavalent chromium*	Trace	18450-29-9

Any concentration shown as a range is to protect confidentiality or is due to process variation.

\*Hexavalent chromium is included due to dermal sensitivity associated with the component.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

## Description of necessary first aid measures

Eye contact:	Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician.
Inhalation:	Seek medical help if coughing or other symptoms persist. Inhalation of large amounts of slag cement requires immediate medical attention. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If the individual is not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.
Skin contact:	Get medical attention immediately. Heavy exposure to slag cement dust, wet concrete or associated water requires prompt attention. Quickly remove contaminated clothing, shoes, and leather goods such as watchbands and belts. Quickly and gently blot or brush away excess slag cement. Immediately wash thoroughly with lukewarm, gently flowing water and non-abrasive pH neutral soap. Seek medical attention for rashes, burns, irritation, dermatitis and prolonged unprotected exposures to wet cement, cement mixtures or liquids from wet cement. Burns should be treated as caustic burns. Slag cement causes skin burns with little warning. Discomfort or pain cannot be relied upon to alert a person to a serious injury. You may not feel pain or the severity of the burn until hours after the exposure. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure.
Ingestion:	Get medical attention immediately. Call a poison center or physician. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING unless directed to do so by medical personnel. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Have victim drink 60 to 240 mL (2 to 8 oz.) of water. Stop giving water if the exposed person feels sick as vomiting may be dangerous. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

## Most important symptoms/effects acute and delayed potential acute health effects

Eye contact:	Causes serious eye damage.
Inhalation:	May cause respiratory irritation.
Skin contact:	Causes severe burns. May cause an allergic skin reaction.
Ingestion:	May cause burns to mouth, throat and stomach.

#### First-aid exposure signs/symptoms

Eye contact:	Adverse symptoms may include the following: pain, watering and redness
Inhalation:	Adverse symptoms may include the following: respiratory tract irritation and coughing
Skin contact:	Adverse symptoms may include the following: pain or irritation, redness and blistering may occur, skin burns, ulceration and necrosis may occur
Ingestion:	Adverse symptoms may include the following: stomach pains

#### Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments:	Not applicable.
Protection of first-aiders:	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

#### Extinguishing media

Suitable extinguishing media:	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media:	Do not use water jet or water-based fire extinguishers.
Specific hazards arising from the chemical:	No specific fire or explosion hazard.
Hazardous thermal decomposition products:	Decomposition products may include the following materials: carbon dioxide, carbon monoxide, sulfur oxides and metal oxide/oxides
Special protective actions for fire-fighters:	Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders:	For personal protective clothing requirements, please see Section 8.
Environmental precautions:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has entered the environment, including waterways, soil or air. Materials can enter waterways through drainage systems.

#### Methods and materials for containment and cleaning up

Small spill:	Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of waste material by using a licensed waste disposal contractor.
Large spill:	Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and

place dust in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Large spills to waterways may be hazardous due to alkalinity of the product. Dispose of waste material using a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

Protective measures:	Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure by obtaining and following special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe dust. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material and keep the container tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities:	A key to using the product safely requires the user to recognize that portland cement reacts chemically with water to produce calcium hydroxide which can cause severe chemical burns. Every attempt should be made to avoid skin and eye contact with cement. Do not get slag cement inside boots, shoes or gloves. Do not allow wet, saturated clothing to remain against the skin. Promptly remove clothing and shoes that are dusty or wet with cement mixtures. Launder/clean clothing and shoes before reuse. Do not enter a confined space that stores or contains slag cement unless appropriate procedures and protection are available. Slag cement can build up or adhere to the walls of a confined space and then release or fall suddenly (engulfment).

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Cement, slag, chemicals	<p>ACGIH TLV (United States, 3/2012). TWA: 1 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction</p> <p>NIOSH REL (United States, 6/2009). TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Respirable fraction TWA: 10 mg/m<sup>3</sup> 10 hours. Form: Total</p> <p>OSHA PEL (United States, 6/2010). TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust</p> <p>Exposure limits in Canada are under provincial jurisdictions.</p>
Calcium oxide	<p>ACGIH TLV (United States, 3/2012). TWA: 2 mg/m<sup>3</sup> 8 hours.</p> <p>NIOSH REL (United States, 6/2009). TWA: 2 mg/m<sup>3</sup> 10 hours.</p> <p>OSHA PEL (United States, 6/2010). TWA: 5 mg/m<sup>3</sup> 8 hours.</p> <p>Exposure limits in Canada are under provincial jurisdictions.</p>

Magnesium oxide	ACGIH TLV (United States, 3/2012). TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction OSHA PEL (United States, 6/2010). TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total particulates Exposure limits in Canada are under provincial jurisdictions.
Quartz	ACGIH TLV (United States, 3/2012). TWA: 0.025 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction NIOSH REL (United States, 6/2009). TWA: 0.05 mg/m <sup>3</sup> 10 hours. Form: respirable dust OSHA PEL Z-3 (United States, 9/2005). TWA: 10mg/m <sup>3</sup> divided by %SiO <sub>2</sub> + 2: Respirable TWA: 30mg/m <sup>3</sup> divided by %SiO <sub>2</sub> + 2: Total Exposure limits in Canada are under provincial jurisdictions.

Appropriate engineering controls:	Use only with adequate ventilation. If user operations generate dust, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Environmental exposure controls:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

### Individual protection measures

Hygiene measures:	Clean water should always be readily available for skin and (emergency) eye washing. Periodically wash areas contacted by slag cement with a pH neutral soap and clean, uncontaminated water. If clothing becomes saturated with slag cement, garments should be removed and replaced with clean, dry clothing.
Eye/face protection:	To prevent eye contact, wear safety glasses with side shields, safety goggles or face shields when handling dust or wet cement. Wearing contact lenses when working with cement is not recommended.

### Skin protection

Hand protection:	Use impervious, waterproof, abrasion and alkali-resistant gloves. Do not rely on barrier creams in place of impervious gloves. Do not get slag cement inside gloves.
Body protection:	Use impervious, waterproof, abrasion and alkali-resistant boots and protective long-sleeved and long-legged clothing to protect the skin from contact with wet slag cement. To reduce foot and ankle exposure, wear impervious boots that are high enough to prevent slag cement from getting inside them. Do not get slag cement inside boots, shoes, or gloves. Remove clothing and protective equipment that becomes saturated with cement and immediately wash exposed areas of the body.
Other skin protection:	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved. Footwear and other gear to protect the skin should be approved by a specialist before handling this product.
Respiratory protection:	Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product, and assigned protection factor of the selected respirator.

## Section 9. Physical and chemical properties

### Information

Physical State:	Solid. [Powder.]	Lower and upper explosive (flammable) limits:	Not applicable.
Color:	Various (Gray or white).	Vapor pressure:	Not applicable.
Odor:	Odorless.	Vapor density:	Not applicable.
Odor threshold:	Not available.	Relative density:	2.3 to 3.1
pH:	>11.5 [Conc. (% w/w): 1%]	Solubility:	Slightly soluble in water.
Melting point:	Not available.	Solubility in water:	0.1 to 1%
Boiling point:	>1000°C (>1832°F)	Partition coefficient: n-octanol/water:	Not applicable.
Flash point:	Not flammable. Not combustible.	Auto-ignition temperature:	Not applicable.
Burning time:	Not available.	Decomposition temperature:	Not available.
Burning rate:	Not available.	SADT:	Not available.
Evaporation rate:	Not applicable.	Viscosity:	Not applicable.
Flammability (solid, gas):	Not applicable.		

## Section 10. Stability and reactivity

Reactivity:	Reacts slowly with water forming hydrated compounds, releasing heat and producing a strong alkaline solution until reaction is substantially complete.
Chemical stability:	The product is stable.
Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid:	No specific data.
Incompatible materials:	Reactive or incompatible with the following materials: oxidizing materials, acids, aluminum and ammonium salt. Slag cement is highly alkaline and will react with acids to produce a violent, heat-generating reaction. Toxic gases or vapors may be given off depending on the acid involved. Reacts with acids, aluminum metals and ammonium salts. Aluminum powder and other alkali and alkaline earth elements will react in wet mortar or concrete, liberating hydrogen gas. Limestone ignites on contact with fluorine and is incompatible with acids, alum, ammonium salts, and magnesium. Silica reacts violently with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride yielding possible fire and/or explosions. Silicates dissolve readily in hydrofluoric acid producing a corrosive gas — silicon tetrafluoride.
Hazardous decomposition products:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

Acute toxicity:	Portland Cement LD50/LC50 = Not available
Irritation/Corrosion:	Skin: May cause skin irritation. May cause serious burns in the presence of moisture. Eyes: Causes serious eye damage. May cause burns in the presence of moisture. Respiratory: May cause respiratory tract irritation.
Sensitization:	May cause sensitization due to the potential presence of trace amounts of hexavalent chromium.
Mutagenicity:	There are no data available.
Carcinogenicity:	
Classification	

Product/ingredient name	OSHA	IARC	ACGIH	NTP
Cement, slag, chemicals	—	—	A4	—
Quartz	—	1	A2	Known to be a human carcinogen.

Reproductive toxicity: There are no data available.

Teratogenicity: There are no data available.

#### Specific target organ toxicity (single exposure)

Name	Category	Route of Exposure	Target Organs
Calcium oxide	Category 3	Inhalation and skin contact	Respiratory tract irritation, skin irritation
Cement, portland, chemicals	Category 3	Inhalation and skin contact	Respiratory tract irritation, skin irritation

#### Specific target organ toxicity (repeated exposure)

Name	Category	Route of Exposure	Target Organs
Quartz	Category 1	Inhalation	Respiratory tract and kidneys

Aspiration hazard: There are no data available.

#### Information on the likely routes of exposure

Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects:

- Eye contact: Causes serious eye damage.
- Inhalation: May cause respiratory irritation.
- Skin contact: Causes severe burns. May cause an allergic skin reaction.
- Ingestion: May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics:

- Eye contact: Adverse symptoms may include the following: pain, watering, redness
- Inhalation: Adverse symptoms may include the following: respiratory tract irritation, coughing
- Skin contact: Adverse symptoms may include the following: pain or irritation, redness, blistering may occur, skin burns, ulcerations and necrosis may occur
- Ingestion: Adverse symptoms may include the following: stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure:

- Short term exposure
- Potential immediate effects: No known significant effects or critical hazards.
- Potential delayed effects: No known significant effects or critical hazards.
- Long term exposure
- Potential immediate effects: No known significant effects or critical hazards.
- Potential delayed effects: No known significant effects or critical hazards.

Potential chronic health effects:

- General: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. If sensitized to hexavalent chromium, a severe allergic dermal reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity: Slag cement is not classifiable as a human carcinogen. Crystalline silica is considered a hazard by



inhalation. IARC has classified crystalline silica as a Group 1 substance, carcinogenic to humans. This classification is based on the findings of laboratory animal studies (inhalation and implantation) and epidemiology studies that were considered sufficient for carcinogenicity. Excessive exposure to crystalline silica can cause silicosis, a non-cancerous lung disease.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity: Acute toxicity estimates: There are no data available.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Calcium oxide	Chronic NOEC 100 mg/L Fresh water	Fish— <i>Oreochromis niloticus</i> —Juvenile (Fledgling, Hatchling, Weanling)	46 days

Persistence and degradability: There are no data available.

Bioaccumulative potential: There are no data available.

Mobility in soil: Soil/water partition coefficient (Koc): Not available.

Other adverse effects: No known significant effects or critical hazards.

## Section 13. Disposal considerations

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Untreated waste should not be released to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe manner. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff, and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	—	—	—
Transport hazard class(es)	—	—	—
Packing group	—	—	—
Environmental hazards	None.	None.	None.
Additional information	—	—	—

Slag Cement products are not considered hazardous under Transport Canada's Transportation of Dangerous Goods (TDG) regulations.

Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not available.

## Section 15. Regulatory information

U.S. Federal regulations: TSCA 6 final risk management: Chromium, ion (Cr6+)  
 United States inventory (TSCA 8b): Portland cements are considered to be statutory mixtures under TSCA. CAS 65997-15-1 is included on the TSCA inventory.  
 Clean Water Act (CWA) 307: Chromium, ion (Cr6+)  
 CERCLA: This product is not listed as a CERCLA substance.

Clean Air Act Section 112 (b): Hazardous Air Pollutants (HAPs) — Not listed

Clean Air Act Section 602: Class I Substances — Not listed

Clean Air Act Section 602: Class II Substances — Not listed

DEA List I Chemicals: (Precursor Chemicals) — Not listed

DEA List II Chemicals: (Essential Chemicals) — Not listed

## SARA III/312

Classification: Immediate (acute) health hazard  
 Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Calcium oxide	A-B	No.	No.	No.	Yes.	No.
Quartz	< 0.2	No.	No.	No.	No.	Yes.
Chromium, ion (Cr6+)	< 0.1	No.	No.	No.	Yes.	Yes.
Nickel Compounds	< 0.1	No.	No.	No.	Yes.	Yes.
Lead (Organic & Inorganic)	< 0.1	No.	No.	No.	No.	Yes.

## SARA III

	Product name	CAS number	%
Form R—Reporting requirements	Chromium, ion (Cr6+)	8540-29-9	< 0.1
	Lead (Organic or Inorganic)	—	< 0.1
	Nickel Compounds	—	< 0.1
Supplier notification	Alternatively, if any of the compounds are not present, state: This product does not contain any constituents listed under SARA Title III Section 313.		



## Canada

WHMIS/DSL: Products containing crystalline silica and calcium carbonate are classified as D2A, E and are subject to WHMIS requirements.

## State regulations

Massachusetts:	The following components are listed: cement, portland, chemicals, limestone
New York:	None of the components are listed.
New Jersey:	The following components are listed: cement, portland, chemicals, gypsum, limestone
Pennsylvania:	The following components are listed: cement, portland, chemicals, gypsum, limestone

## California Prop. 65

WARNING: This product contains crystalline silica and chemicals (trace metals) known to the State of California to cause cancer, birth defects or other reproductive harm. California law requires the above warning in the absence of definitive testing to prove the defined risks do not exist.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Quartz	Yes.	No.	No.	No.
Chromium, ion (Cr6+)	Yes.	Yes.	0.001 µg/day (inhalation)	8.2 micrograms/day (ingestion)
Nickel Compounds	No.	No.	No.	No.
Lead	Yes.	Yes.	15 µg/day (ingestion)	0.5 micrograms/day (inhalation)

## International regulations

International lists:	Canadian Domestic Substances List (DSL): Portland cement is included on the DSL. Mexico Inventory (INSQ): All components are listed or exempted.
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## Section 16. Other information

### History

Date of issue mm/dd/yyyy:	05/15/2015
Version:	1
Revised Section(s):	Not applicable.

### Notice to reader

While the information provided in this safety data sheet is believed to provide a useful summary of the hazards of slag cement as it is commonly used, the sheet cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product. In particular, the data furnished in this sheet do not address hazards that may be posed by other materials mixed with slag cement to produce portland cement products. Users should review other relevant material safety data sheets before working with this slag cement or working on portland cement products, for example, portland cement concrete.

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY Essroc Cement Corp., except that the product shall conform to contracted specifications. The information provided herein was believed by the Essroc Cement Corp. to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of product and to determine the suitability of the product for its intended use. Buyer's exclusive remedy shall be for damages and no claim of any kind, whether as to product delivered or for non-delivery of product, and whether based on contract, breach of warranty, negligence, or otherwise shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

#### ABBREVIATIONS

ACGIH — American Conference of Governmental Industrial Hygienists  
CAS — Chemical Abstract Service  
CERCLA — Comprehensive Emergency Response and Comprehensive Liability Act  
CFR — Code of Federal Regulations  
DOT — Department of Transportation  
GHS — Globally Harmonized System  
HEPA — High Efficiency Particulate Air  
IATA — International Air Transport Association  
IARC — International Agency for Research on Cancer  
IMDG — International Maritime Dangerous Goods  
NIOSH — National Institute of Occupational Safety and Health  
NOEC — No Observed Effect Concentration  
NTP — National Toxicology Program  
OSHA — Occupational Safety and Health Administration  
PEL — Permissible Exposure Limit  
REL — Recommended Exposure Limit  
RQ — Reportable Quantity  
SARA — Superfund Amendments and Reauthorization Act  
SDS — Safety Data Sheet  
TLV — Threshold Limit Value  
TPQ — Threshold Planning Quantity  
TSCA — Toxic Substances Control Act  
TWA — Time-Weighted Average  
UN — United Nations

**ATTACHMENT O**

**EMISSIONS SUMMARY SHEET**

## CBP EMISSION SUMMARY SHEET

Red indicates numbers have been changed.

Source	PM		PM <sub>10</sub>	
	PTE (lb/hr)	PTE (ton/yr)	PTE (lb/hr)	PTE (ton/yr)
Total Aggregate Transfer Emissions <sup>1</sup>	0.725	0.725	0.347	0.347
Total Sand Transfer Emissions <sup>1</sup>	0.155	0.155	0.073	0.073
Cement Unloading to Elevated Storage Silo (Pneumatic) <sup>2</sup>	0.032	0.032	0.011	0.011
Pneumatic Cement Additive Unloading to Silo <sup>2</sup>	0.662	0.142	0.238	0.058
Weigh Hopper Loading <sup>3</sup>	1.985	1.255	0.936	0.596
Mixer Loading (Central) <sup>3</sup>	2.363	2.363	0.816	0.816
Truck Mix Loading <sup>3</sup>	45.108	45.108	10.955	10.955
Paved Haulroads <sup>4</sup>				
Unpaved Haulroads <sup>4</sup>	16.88	15.83	7.38	7.07
Wind Erosion from Storage Piles <sup>5</sup>	0.153	0.153	0.073	0.073
Total	67.333	65.663	20.609	19.969

1. Enter the potential to emit of PM and PM10 associated with the transfer of sand and aggregate from stockpiles to elevated bins. Use appropriate emission factors and/or equations from the CBP Emission Factor Sheet. Emission calculations may also be determined using spreadsheet G50ECALC.

2. Enter the potential to emit of PM and PM10 associated with the pneumatic transfer of cement and cement additive to storage structures or silos. Use appropriate emission factors and/or equations from the CBP Emission Factor Sheet. Emission calculations may also be determined using spreadsheet G50ECALC.

3. Enter the potential to emit of PM and PM10 associated with loading of weigh hopper(s), central mixer and trucks. Use appropriate emission factors and/or equations from the CBP Emission Factor Sheet. Emission calculations may also be determined using spreadsheet G50ECALC.

4. Enter the potential to emit of PM and PM10 associated with vehicle activity on paved or unpaved haulroad(s). Use appropriate emission factors and/or equations from the CBP Emission Factor Sheet. Emission calculations may also be determined using spreadsheet G50ECALC.

5. Enter the potential to emit of PM and PM10 associated with wind erosion from sand and aggregate stockpiles. Use appropriate emission factors and/or equations from the CBP Emission Factor Sheet. Emission calculations may also be determined using spreadsheet G50ECALC.

6. Attach all potential emission calculations/spreadsheet output to this CBP Emission Summary Sheet.