



**Section 3: Facility-Wide Emissions**

<b>23. Facility-Wide Emissions Summary [Tons per Year]</b>	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	13.75
Nitrogen Oxides (NO <sub>x</sub> )	96.35
Lead (Pb)	0.21
Particulate Matter (PM <sub>2.5</sub> ) <sup>1</sup>	114.30
Particulate Matter (PM <sub>10</sub> ) <sup>1</sup>	239.20
Total Particulate Matter (TSP)	534.96
Sulfur Dioxide (SO <sub>2</sub> )	267.00
Volatile Organic Compounds (VOC)	1.29
Hazardous Air Pollutants <sup>2</sup>	Potential Emissions
Total HAP	2.323
Regulated Pollutants other than Criteria and HAP	Potential Emissions
Carbon Dioxide (CO <sub>2</sub> )	61,682.95
Methane (CH <sub>4</sub> )	2.54
Nitrous Oxide (N <sub>2</sub> O)	0.51

<sup>1</sup>PM<sub>2.5</sub> and PM<sub>10</sub> are components of TSP.  
<sup>2</sup>For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

**Section 4: Insignificant Activities**

<b>24. Insignificant Activities (Check all that apply)</b>	
<input checked="" type="checkbox"/>	1. Air compressors and pneumatically operated equipment, including hand tools.
<input type="checkbox"/>	2. Air contaminant detectors or recorders, combustion controllers or shutoffs.
<input checked="" type="checkbox"/>	3. Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
<input checked="" type="checkbox"/>	4. Bathroom/toilet vent emissions.
<input checked="" type="checkbox"/>	5. Batteries and battery charging stations, except at battery manufacturing plants.
<input checked="" type="checkbox"/>	6. Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
<input type="checkbox"/>	7. Blacksmith forges.
<input type="checkbox"/>	8. Boiler water treatment operations, not including cooling towers.
<input checked="" type="checkbox"/>	9. Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
<input type="checkbox"/>	10. CO <sub>2</sub> lasers, used only on metals and other materials which do not emit HAP in the process.
<input checked="" type="checkbox"/>	11. Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
<input type="checkbox"/>	12. Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
<input checked="" type="checkbox"/>	13. Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
<input type="checkbox"/>	14. Demineralized water tanks and demineralizer vents.
<input checked="" type="checkbox"/>	15. Drop hammers or hydraulic presses for forging or metalworking.
<input checked="" type="checkbox"/>	16. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
<input type="checkbox"/>	17. Emergency (backup) electrical generators at residential locations.
<input checked="" type="checkbox"/>	18. Emergency road flares.
<input checked="" type="checkbox"/>	19. Emission units which do not have any applicable requirements, and which emit criteria pollutants (CO, NO <sub>x</sub> , SO <sub>2</sub> , VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:  <u>All organic liquid tanks listed in Attachment D</u>
<input type="checkbox"/>	20. Emission units which do not have any applicable requirements, and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27. Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:  _____
<input type="checkbox"/>	21. Environmental chambers not using hazardous air pollutant (HAP) gases.
<input checked="" type="checkbox"/>	22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
<input type="checkbox"/>	23. Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
<input checked="" type="checkbox"/>	24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
<input type="checkbox"/>	25. Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
<input checked="" type="checkbox"/>	26. Fire suppression systems.
<input type="checkbox"/>	27. Firefighting equipment and the equipment used to train firefighters.

<b>24. Insignificant Activities (Check all that apply)</b>	
<input type="checkbox"/>	28. Flares used solely to indicate danger to the public.
<input checked="" type="checkbox"/>	29. Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
<input type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input checked="" type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input type="checkbox"/>	32. Humidity chambers.
<input type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input checked="" type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input checked="" type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input type="checkbox"/>	37. Laundry activities, except for dry-cleaning and steam boilers.
<input type="checkbox"/>	38. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
<input type="checkbox"/>	39. Oxygen scavenging (de-aeration) of water.
<input type="checkbox"/>	40. Ozone generators.
<input checked="" type="checkbox"/>	41. Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
<input checked="" type="checkbox"/>	42. Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
<input type="checkbox"/>	43. Process water filtration systems and demineralizers.
<input checked="" type="checkbox"/>	44. Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
<input checked="" type="checkbox"/>	45. Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
<input checked="" type="checkbox"/>	46. Routing calibration and maintenance of laboratory equipment or other analytical instruments.
<input type="checkbox"/>	47. Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
<input type="checkbox"/>	48. Shock chambers.
<input type="checkbox"/>	49. Solar simulators.
<input checked="" type="checkbox"/>	50. Space heaters operating by direct heat transfer.
<input checked="" type="checkbox"/>	51. Steam cleaning operations.
<input type="checkbox"/>	52. Steam leaks.
<input type="checkbox"/>	53. Steam sterilizers.
<input type="checkbox"/>	54. Steam vents and safety relief valves.
<input checked="" type="checkbox"/>	55. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
<input checked="" type="checkbox"/>	56. Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
<input type="checkbox"/>	57. Such other sources or activities as the Director may determine.
<input type="checkbox"/>	58. Tobacco smoking rooms and areas.
<input type="checkbox"/>	59. Vents from continuous emissions monitors and other analyzers.

*Section 5: Emission Units, Control Devices, and Emission Points*

<b>25. Equipment Table</b>
Fill out the <b>Title V Equipment Table</b> and provide it as <b>ATTACHMENT D</b> .
<b>26. Emission Units</b>
For each emission unit listed in the <b>Title V Equipment Table</b> , fill out and provide an <b>Emission Unit Form</b> as <b>ATTACHMENT E</b> .
For each emission unit not in compliance with an applicable requirement, fill out a <b>Schedule of Compliance Form</b> as <b>ATTACHMENT F</b> .
<b>27. Control Devices</b>
For each control device listed in the <b>Title V Equipment Table</b> , fill out and provide an <b>Air Pollution Control Device Form</b> as <b>ATTACHMENT G</b> .
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the <b>Compliance Assurance Monitoring (CAM) Form(s)</b> for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as <b>ATTACHMENT H</b> .

**28. Certification of Truth, Accuracy and Completeness and Certification of Compliance**

*Note: This Certification must be signed by a responsible official. The original, signed in blue ink, must be submitted with the application. Applications without an original signed certification will be considered as incomplete.*

**a. Certification of Truth, Accuracy and Completeness**

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

**b. Compliance Certification**

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

**Responsible official (type or print)**

Name: Jason Bish

Title: Vice President of EHS

**Responsible official's signature:**

Signature: 

Signature Date: 10/23/23

(Must be signed and dated in blue ink)

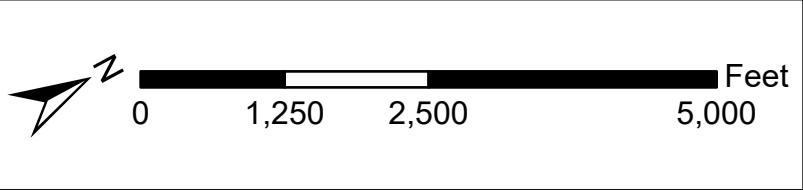
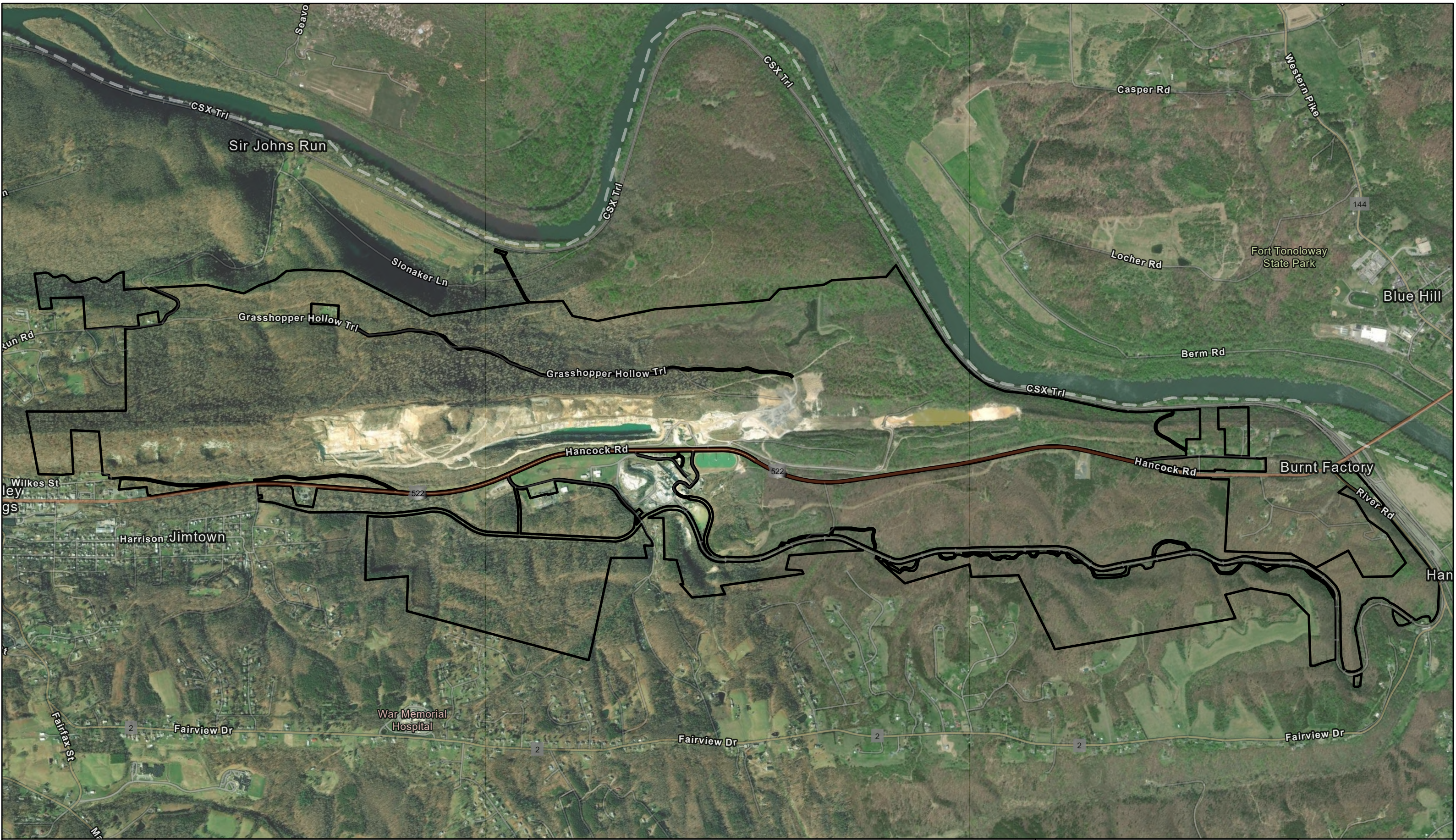
**Note: Please check all applicable attachments included with this permit application:**

- |                                     |  |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | ATTACHMENT A: Area Map   |
| <input checked="" type="checkbox"/> | ATTACHMENT B: Plot Plan(s)   |
| <input checked="" type="checkbox"/> | ATTACHMENT C: Process Flow Diagram(s)  |
| <input checked="" type="checkbox"/> | ATTACHMENT D: Equipment Table  |
| <input checked="" type="checkbox"/> | ATTACHMENT E: Emission Unit Form(s)  |
| <input checked="" type="checkbox"/> | ATTACHMENT F: Schedule of Compliance Form(s) (Not Applicable Based on Compliance Status)               |
| <input checked="" type="checkbox"/> | ATTACHMENT G: Air Pollution Control Device Form(s)   |
| <input checked="" type="checkbox"/> | ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s) (Included but No Changes to Prior Version) |

**All of the required forms and additional information can be found and downloaded from, the DEP website at [www.dep.wv.gov/dag](http://www.dep.wv.gov/dag), requested by phone (304) 926-0475, and/or obtained through the map**

Attachment A

Area Map



# Berkeley Facility Site Map

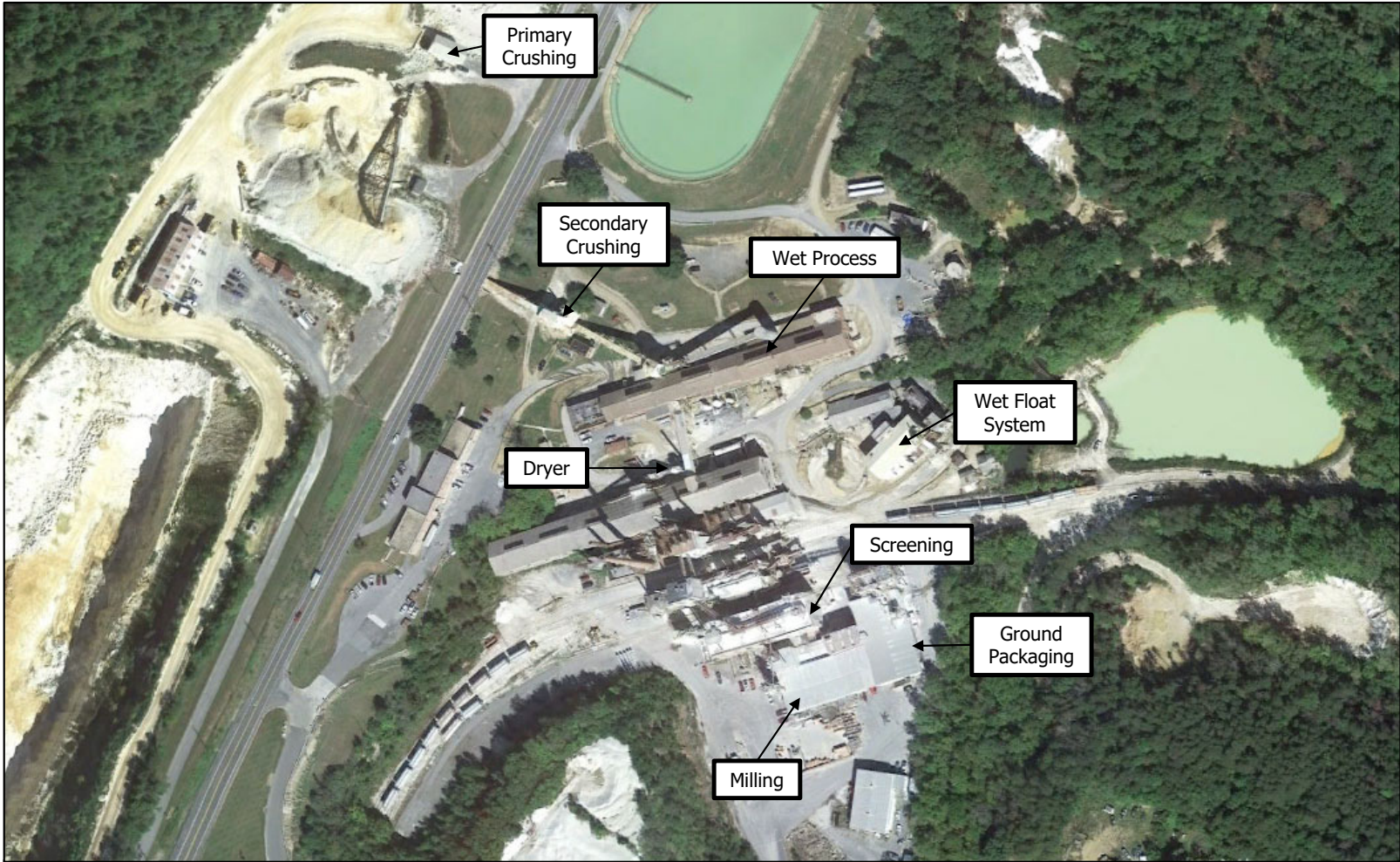
Property Outline

Created By: T. A. Lindblad
Date: 10052023
File Location: \\BerkeleyWestVirginia\Outline



Attachment B

Plot Plan

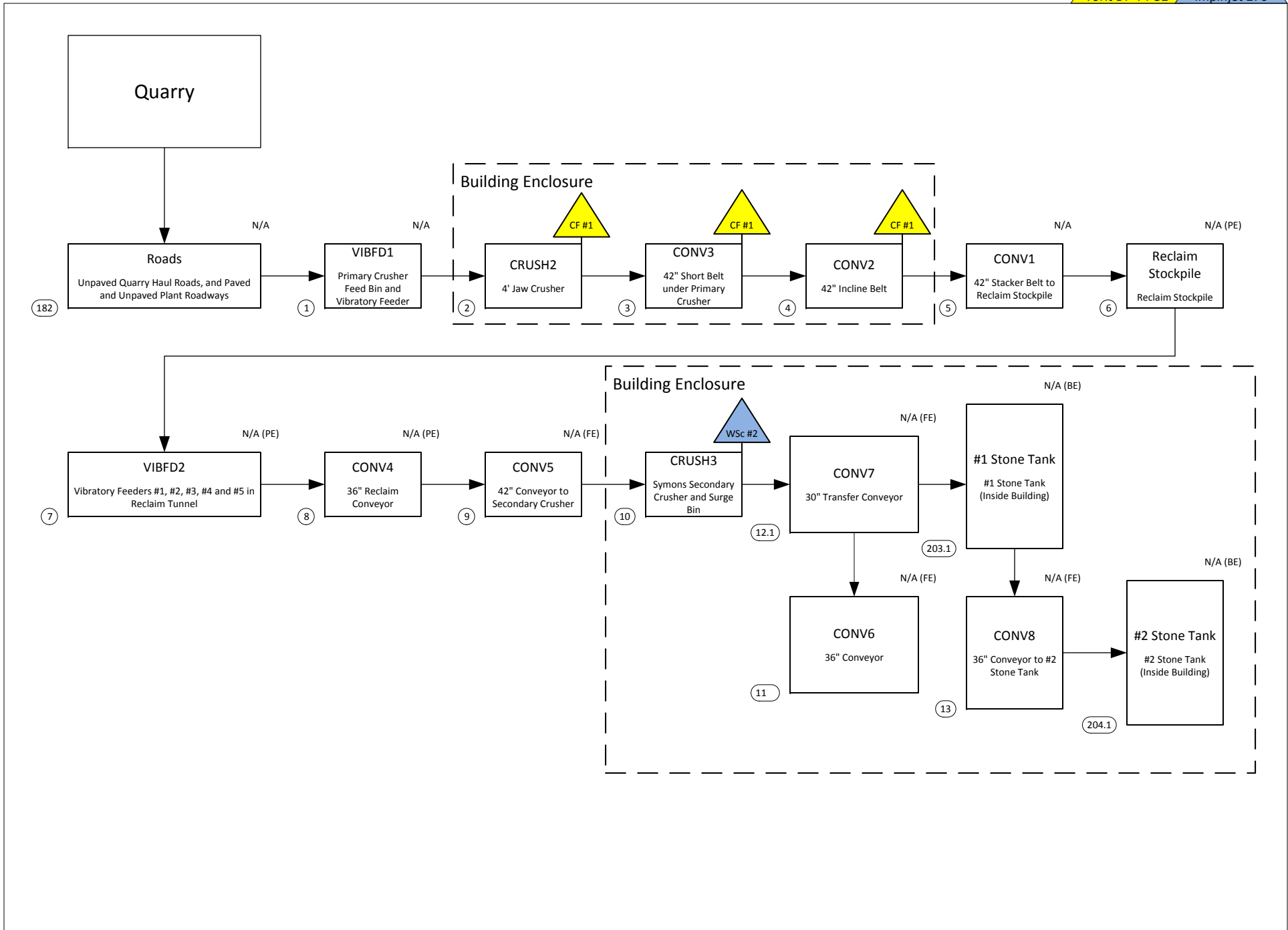


 Environmental Department		<b>Berkeley Facility Plot Plan</b>	
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Attachment C

Process Flow Diagram

Figure 1. Primary and Secondary Crushing



**Figure 2. Wet Processing Plant ( Rod Mill Building )**

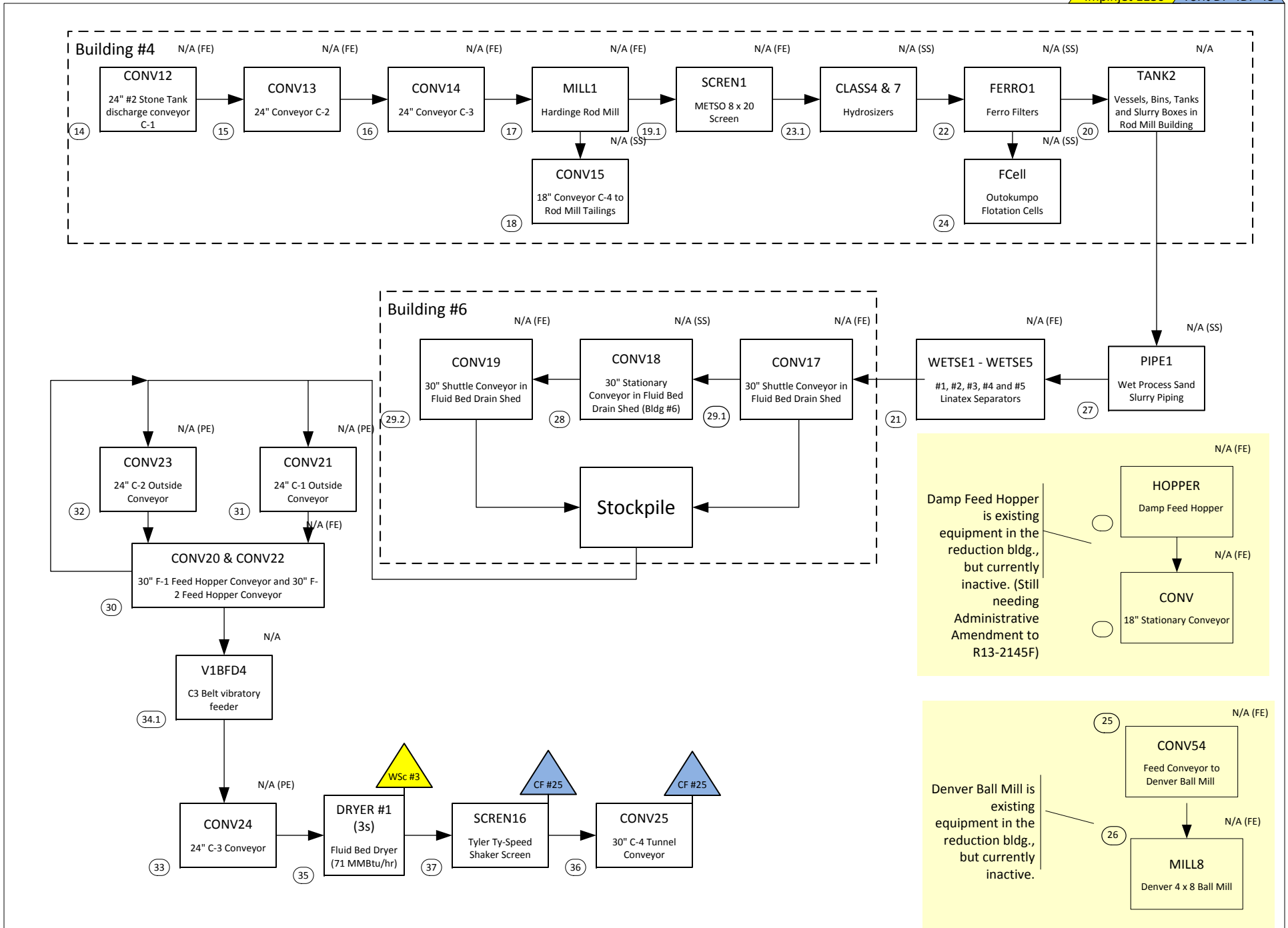
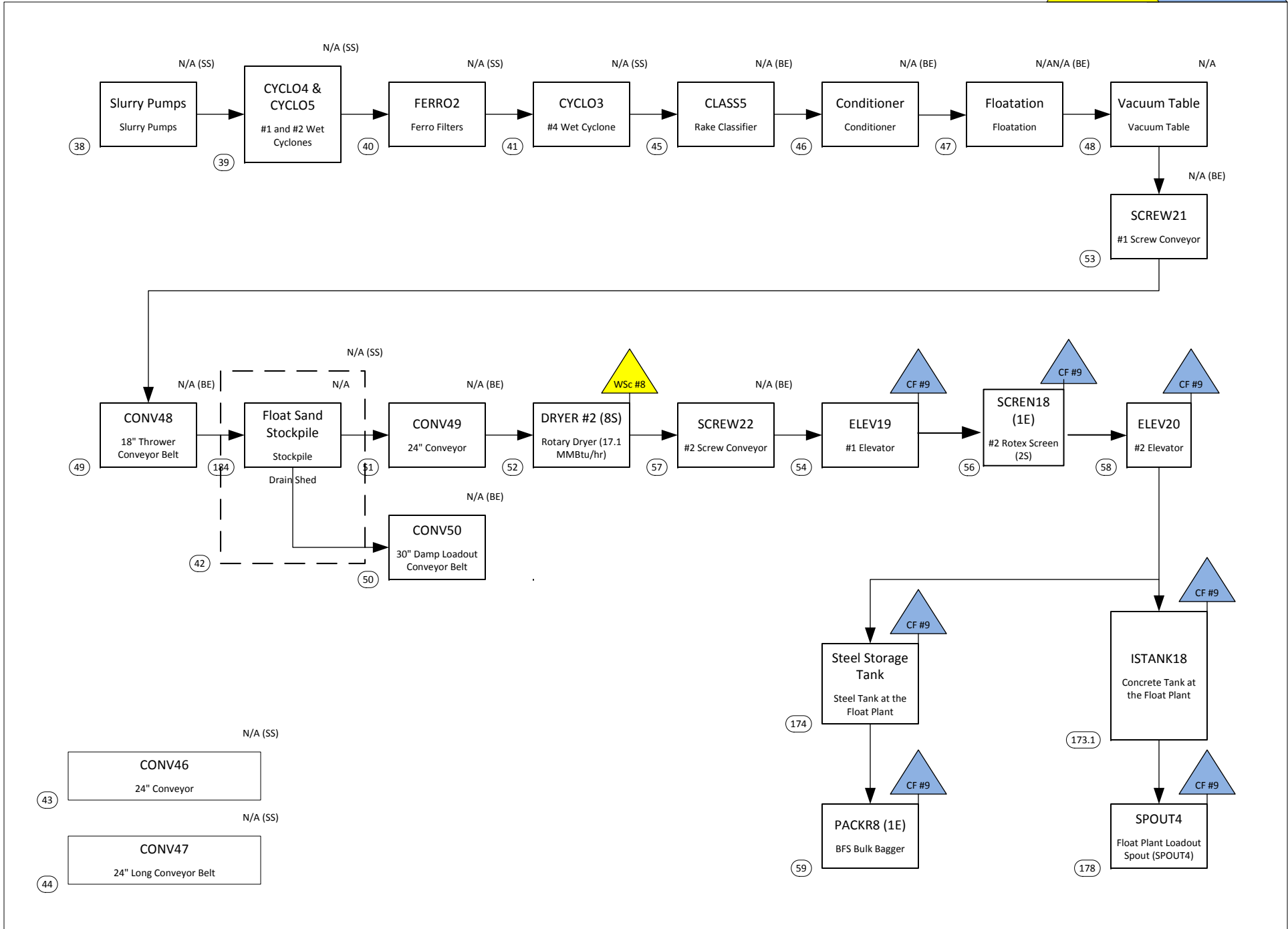


Figure 3. Wet Float System (Currently Inactive)



**Figure 4. Screening and Uground Sand Processing (6-4-13)**

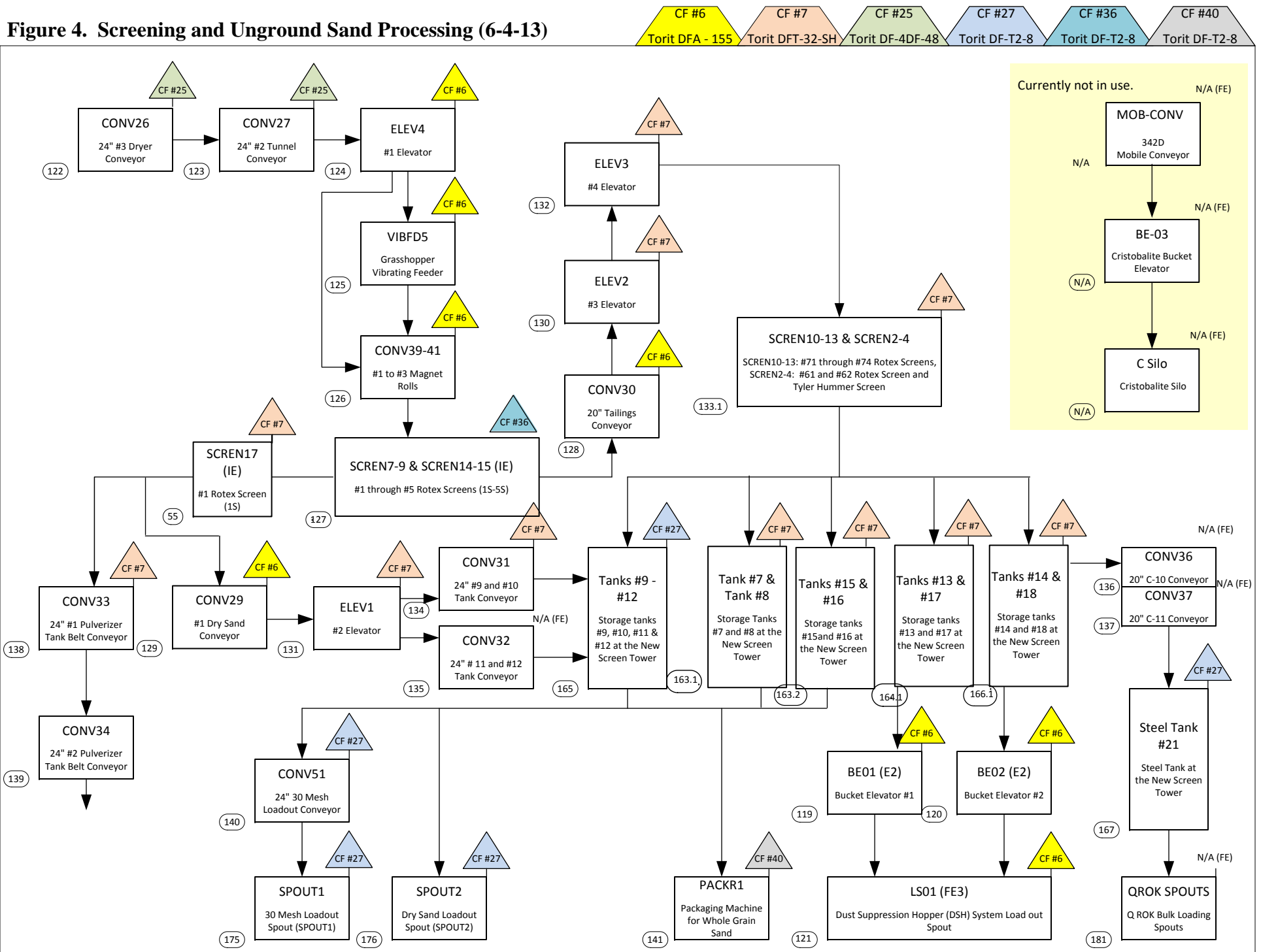


Figure 5. Milling - #1 through #4 Pebble Mills

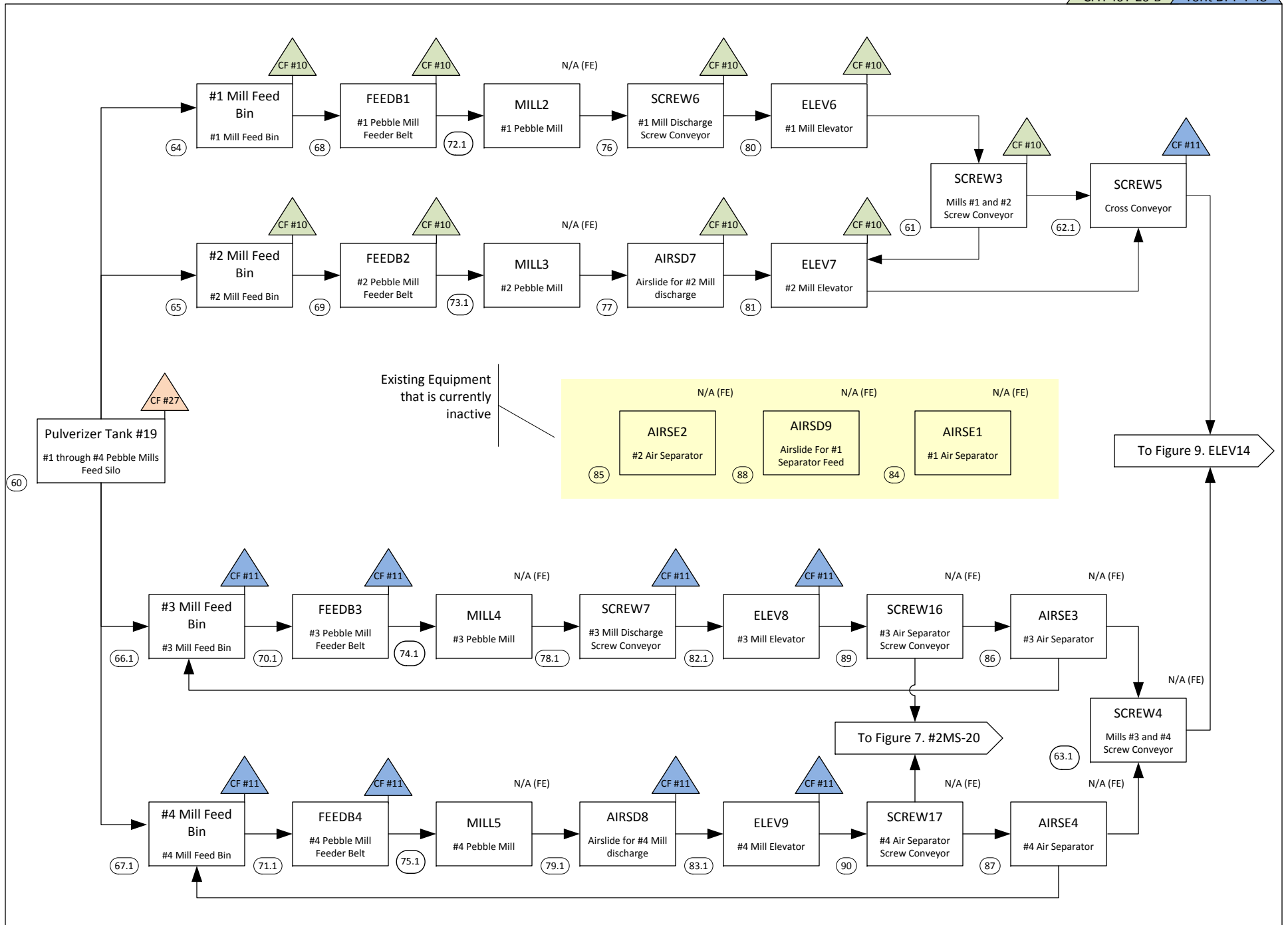
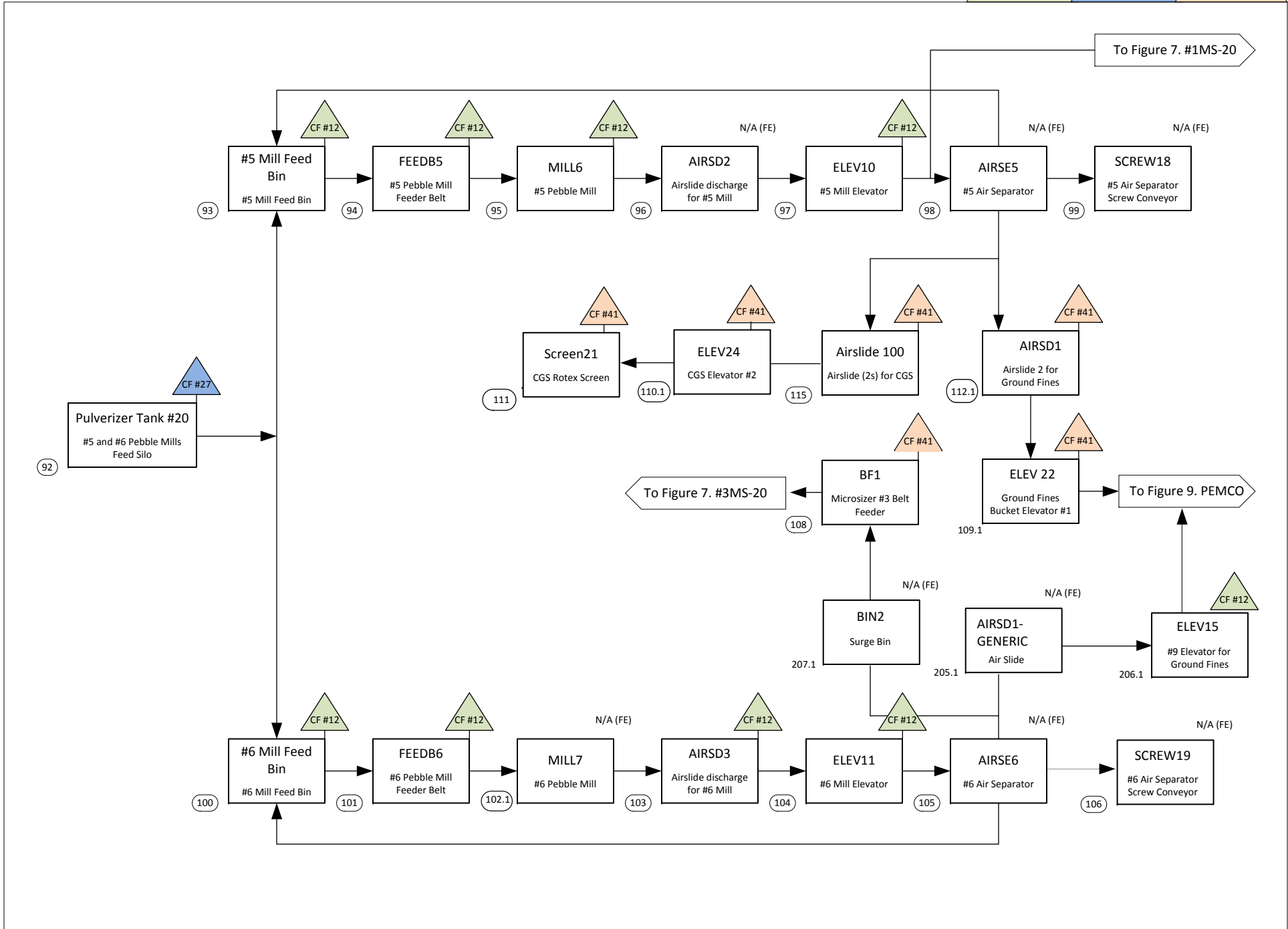




Figure 6. Milling - #5 and #6 Pebble Mills, and Coarse Ground Special Circuit

CF #12 CFH 40T-20-B  
 CF #27 Torit DF-T2-8  
 CF #41 DFT2-4-155



**Figure 7. Micro-sizer Classification 10/20/30/40 Micron**

CF #42 DFT-3-6  
 CF #11 CFH 40T-20-B  
 CF #12 CFH 40T-20-B

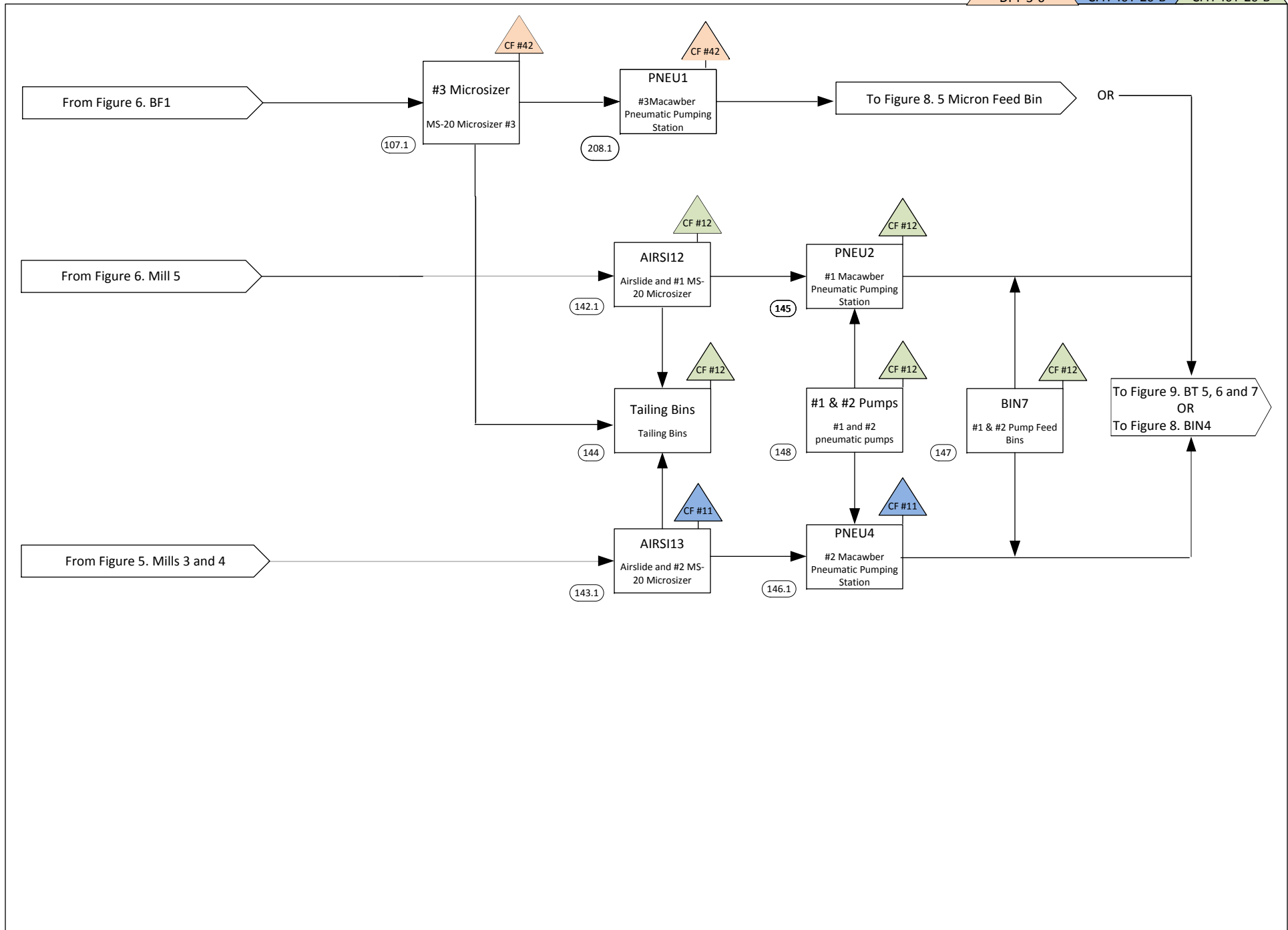
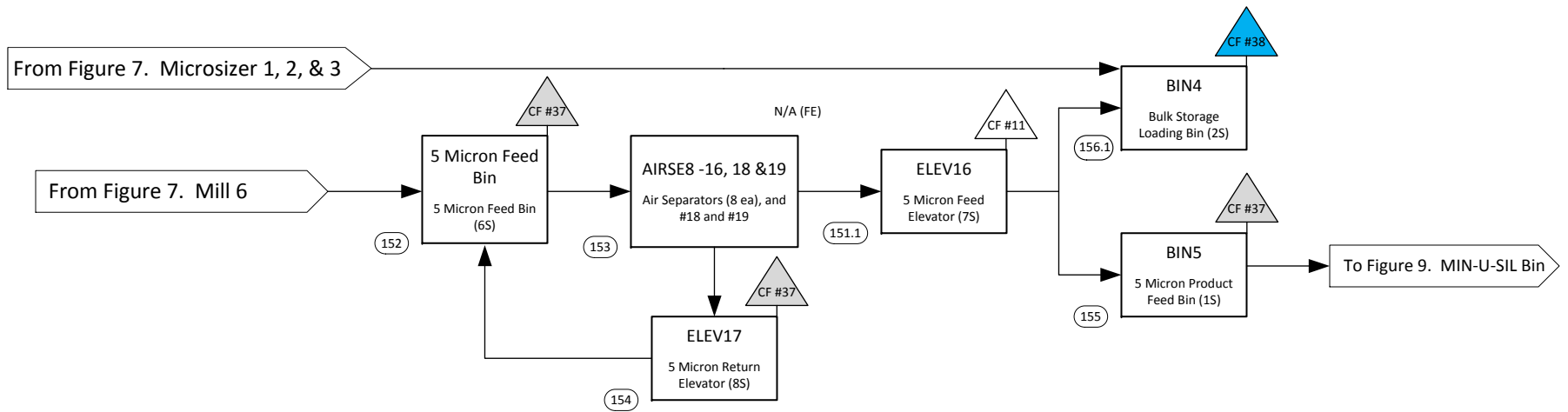


Figure 8. 5 Micron Classification, Loading and Packaging



**Figure 9. Loading and Packaging**

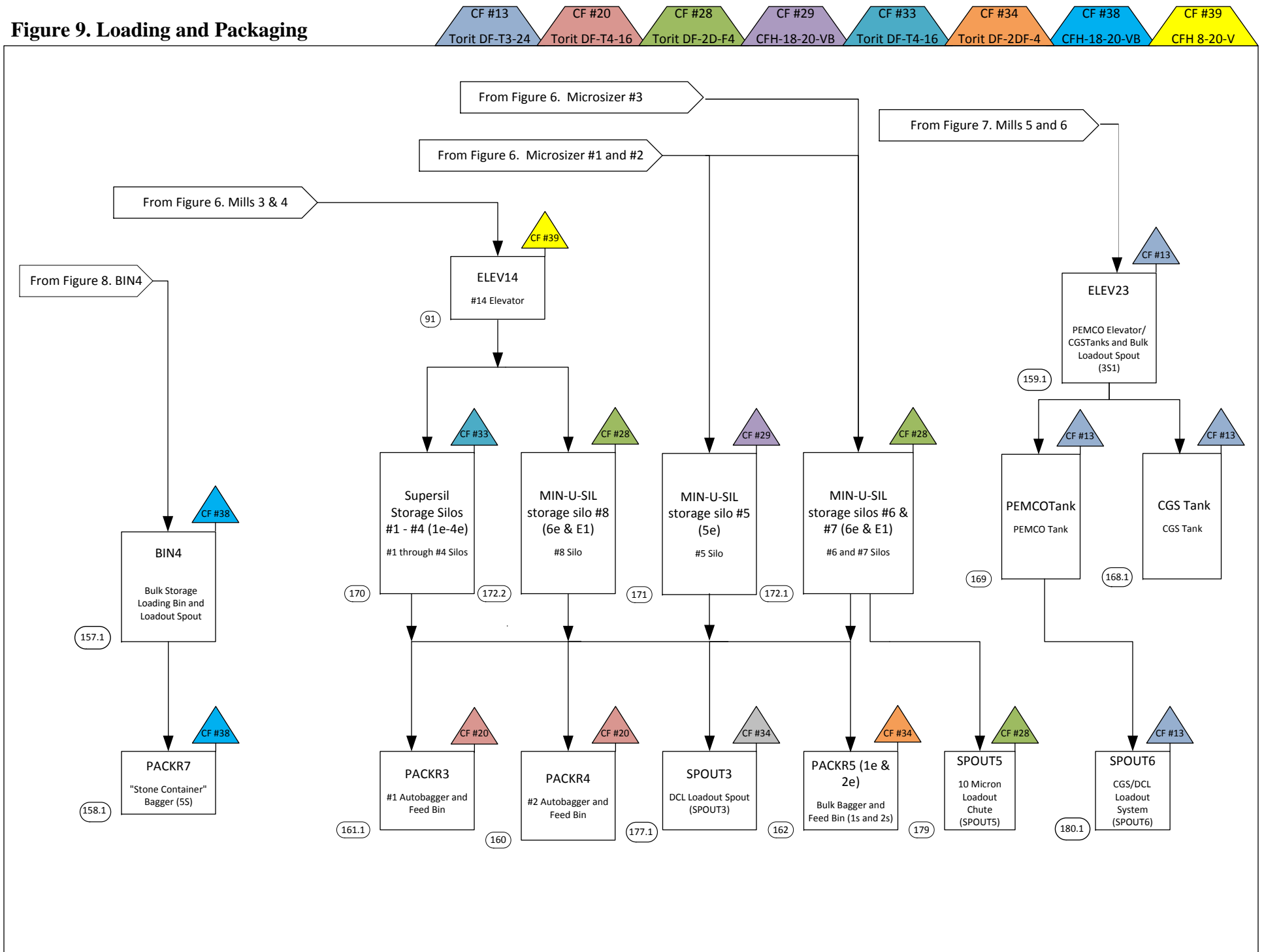
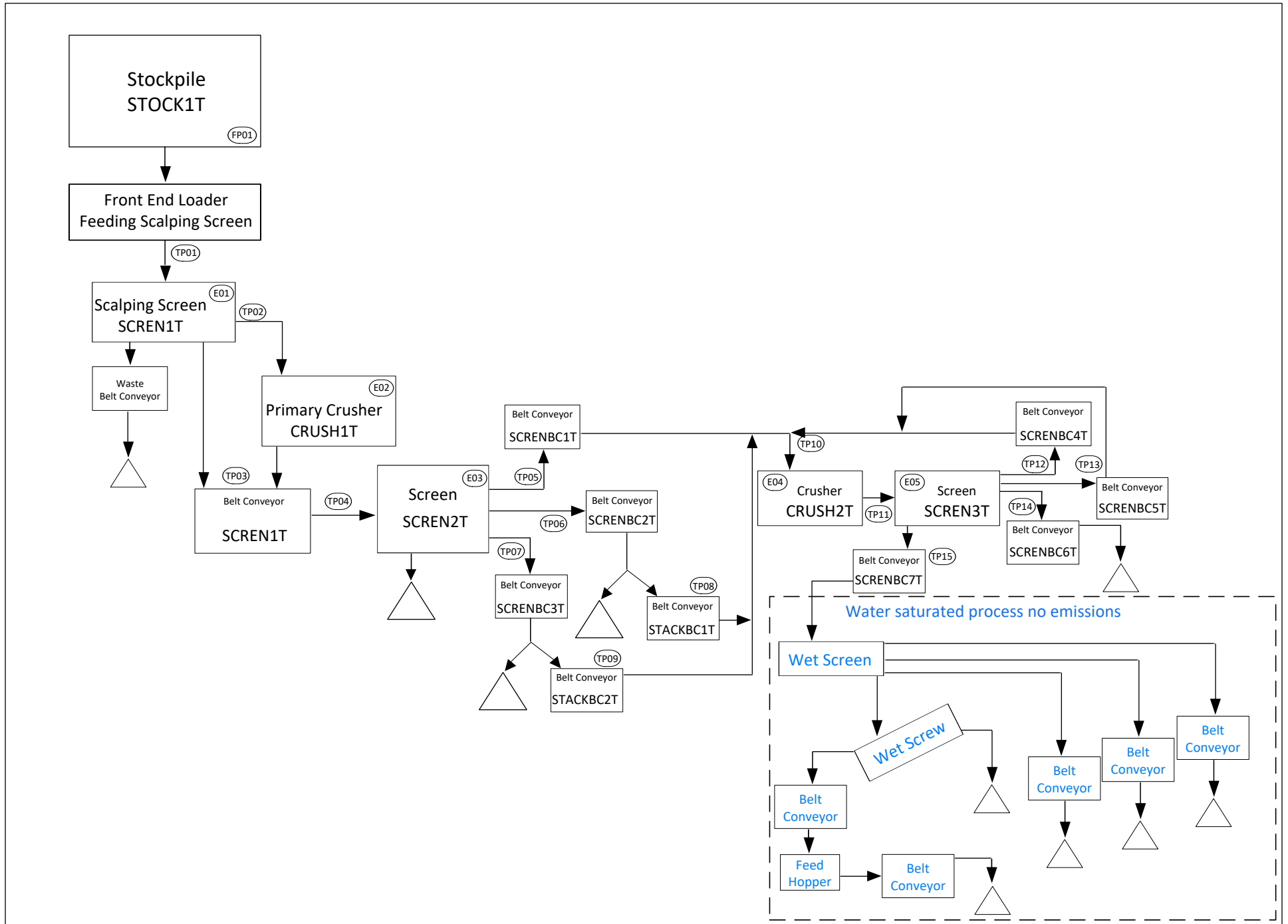


Figure 10. Limestone Processing Plant



Attachment D

Equipment Table

**ATTACHMENT D - Title V Equipment Table**  
**(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)**

<b>Process Flow Diagram Number</b>	<b>Emission Point ID</b>	<b>Control Device<sup>1</sup></b>	<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Design Capacity TPY</b>	<b>Year Installed/Modified</b>
<b>Primary Crushing Plant</b>						
1	N/A	N/A	VIBFD1	Primary Crusher Feed Bin and Vibratory Feeder	1000	Pre-1970
2	Stack #1	CF #1	CRUSH2	4' Jaw Crusher	800	Pre-1970
3	Stack #1	CF #1	CONV3	42" Short Belt under Primary Crusher	800	Pre-1970
4	Stack #1	CF #1	CONV2	42" Incline Belt	800	Pre-1970
5	N/A	N/A	CONV1	42" Stacker Belt to Reclaim Stockpile	800	Pre-1970
6	Reclaim Stockpile	N/A (PE)	Reclaim Stockpile	Reclaim Stockpile	800	Pre-1970
<b>Secondary Crushing Plant</b>						
7	N/A	N/A (PE)	VIBFD2	Vibratory Feeders #1, #2, #3, #4 and #5 in Reclaim Tunnel	400	Pre-1970
8	N/A	N/A (PE)	CONV4	36" Reclaim Conveyor	400	Pre-1970
9	N/A	N/A (FE)	CONV5	42" Conveyor to Secondary Crusher	400	Pre-1970
10	Stack #2	WSc #2	CRUSH3	Symons Secondary Crusher and Surge Bin	400	Pre-1970
11	N/A	N/A (FE)	CONV6	36" Conveyor	400	Pre-1970
12.1	N/A	N/A (FE)	CONV7	30" Transfer Conveyor	400	Pre-1970
13	N/A	N/A (FE)	CONV8	36" Conveyor to #2 Stone Tank	400	Pre-1970
<b>Wet Processing Plant (Rod Mill Building)</b>						
14	N/A	N/A (FE)	CONV12	24" #2 Stone Tank discharge conveyor C-1	200	Pre-1970
15	N/A	N/A (FE)	CONV13	24" Conveyor C-2	200	Pre-1970
16	N/A	N/A (FE)	CONV14	24" Conveyor C-3	200	Pre-1970
17	N/A	N/A (FE)	MILL1	Hardinge Rod Mill	200	Pre-1970
18	N/A	N/A (SS)	CONV15	18" Conveyor C-4 to Rod Mill Tailings	150	Pre-1970
19.1	N/A	N/A (FE)	SCREN1	METSO 8 x 20 Screen	200	Pre-1970
20	N/A	N/A	TANK2	Vessels, Bins, Tanks and Slurry Boxes in Rod Mill Building	200	Pre-1970
21	N/A	N/A (FE)	WETSE1 - WETSE5	#1, #2, #3, #4 and #5 Linatex Separators	200	Pre-1970
22	N/A	N/A (SS)	FERRO1	Ferro Filters	200	Pre-1970
23.1	N/A	N/A (SS)	CLASS4&7	Hydrosizers	200	Pre-1970
24	N/A	N/A (SS)	FCell	Outokumpo Flotation Cells	160	2004
25	N/A	N/A (FE)	CONV54	Feed Conveyor to Denver Ball Mill	50	2000
26	N/A	N/A (FE)	MILL8	Denver 4 x 8 Ball Mill	50	2000
27	N/A	N/A (SS)	PIPE1	Wet Process Sand Slurry Piping	200	Pre-1970
28	N/A	N/A (SS)	CONV18	30" Stationary Conveyor in Fluid Bed Drain Shed (Bldg #6)	200	Pre-1970

**ATTACHMENT D - Title V Equipment Table**  
**(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)**

<b>Process Flow Diagram Number</b>	<b>Emission Point ID</b>	<b>Control Device<sup>1</sup></b>	<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Design Capacity TPY</b>	<b>Year Installed/Modified</b>
29.1	N/A	N/A (FE)	CONV17	30" Shuttle Conveyor in Fluid Bed Drain Shed	200	Pre-1970
29.2	N/A	N/A (FE)	CONV19	30" Shuttle Conveyor in Fluid Bed Drain Shed	200	Pre-1970
30	N/A	N/A (FE)	CONV20 & CONV22	30" F-1 Feed Hopper Conveyor and 30" F-2 Feed Hopper Conveyor	200	1975
31	N/A	N/A (PE)	CONV21	24" C-1 Outside Conveyor	200	1975
32	N/A	N/A (PE)	CONV23	24" C-2 Outside Conveyor	200	1975
33	N/A	N/A (PE)	CONV24	24" C-3 Conveyor	200	1975
34.1	N/A	N/A	V1BFD4	C3 Belt, Vibratory Feeder	200	1975
35	Stack #3	WSc #3	DRYER #1 (3s)	Fluid Bed Dryer (71 MMBtu/hr)	200	1975
36	Stack #25	CF #25	CONV25	30" C-4 Tunnel Conveyor	200	1975
37	Stack #25	CF #25	SCREN16	Tyler Ty-Speed Shaker Screen	200	1995
<b>Wet Float Plant</b>						
38	N/A	N/A (SS)	Slurry Pumps	Slurry Pumps	25	Pre-1948
39	N/A	N/A (SS)	CYCLO4 & CYCLO5	#1 and #2 Wet Cyclones	25	Pre-1948
40	N/A	N/A (SS)	FERRO2	Ferro Filters	25	Pre-1948
41	N/A	N/A (SS)	CYCLO3	#4 Wet Cyclone	25	Pre-1948
42	N/A	N/A (SS)	Drain Shed	Drain Shed	25	Pre-1948
43	N/A	N/A (SS)	CONV46	24" Conveyor	25	Pre-1970
44	N/A	N/A (SS)	CONV47	24" Long Conveyor Belt	25	Pre-1970
45	N/A	N/A (BE)	CLASS5	Rake Classifier	25	Pre-1970
46	N/A	N/A (BE)	Conditioner	Conditioner	25	Pre-1970
47	N/A	N/A (BE)	Floatation	Floatation	25	Pre-1970
48	N/A	N/A	Vacuum Table	Vacuum Table	25	Pre-1970
49	N/A	N/A (BE)	CONV48	18" Thrower Conveyor Belt	25	Pre-1970
50	N/A	N/A (BE)	CONV50	30" Damp Loadout Conveyor Belt	25	Pre-1970
51	N/A	N/A (BE)	CONV49	24" Conveyor	25	Pre-1970
52	Stack #8	WSc #8	DRYER #2 (8S)	Rotary Dryer (17.1 MMBtu/hr)	25	Pre-1970
53	N/A	N/A (BE)	SCREW21	#1 Screw Conveyor	25	Pre-1970
54	Stack #9	CF #9	ELEV19	#1 Elevator	25	Pre-1970
56	Stack #9	CF #9	SCREN18 (1E)	#2 Rotex Screen (2S)	50	1999
57	N/A	N/A (BE)	SCREW22	#2 Screw Conveyor	25	Pre-1970
58	Stack #9	CF #9	ELEV20	#2 Elevator	25	Pre-1970



**ATTACHMENT D - Title V Equipment Table**  
**(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)**

<b>Process Flow Diagram Number</b>	<b>Emission Point ID</b>	<b>Control Device<sup>1</sup></b>	<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Design Capacity TPY</b>	<b>Year Installed/Modified</b>
59	Stack #9	CF #9	PACKR8 (1E)	BFS Bulk Bagger	30	1998
Milling Process						
60	Stack #27	CF #27	Pulverizer Tank #19	#1 through #4 Pebble Mills Feed Silo	150	Pre-1970
61	Stack #10	CF #10	SCREW3	Mills #1 and #2 Screw Conveyor	30	Pre-1970
62.1	Stack #11	CF #11	SCREW5	Cross Conveyor	30	Pre-1970
63.1	N/A	N/A (FE)	SCREW4	Mills #3 and #4 Screw Conveyor	30	Pre-1970
64	Stack #10	CF #10	#1 Mill Feed Bin	#1 Mill Feed Bin	100	Pre-1970
65	Stack #10	CF #10	#2 Mill Feed Bin	#2 Mill Feed Bin	100	Pre-1970
66.1	Stack #11	CF #11	#3 Mill Feed Bin	#3 Mill Feed Bin	100	Pre-1970
67.1	Stack #11	CF #11	#4 Mill Feed Bin	#4 Mill Feed Bin	100	Pre-1970
68	Stack #10	CF #10	FEEDB1	#1 Pebble Mill Feeder Belt	15	Pre-1970
69	Stack #10	CF #10	FEEDB2	#2 Pebble Mill Feeder Belt	15	Pre-1970
70.1	Stack #11	CF #11	FEEDB3	#3 Pebble Mill Feeder Belt	15	Pre-1970
71.1	Stack #11	CF #11	FEEDB4	#4 Pebble Mill Feeder Belt	15	Pre-1970
72.1	N/A	N/A (FE)	MILL2	#1 Pebble Mill	100	Pre-1970
73.1	N/A	N/A (FE)	MILL3	#2 Pebble Mill	100	Pre-1970
74.1	N/A	N/A (FE)	MILL4	#3 Pebble Mill	100	Pre-1970
75.1	N/A	N/A (FE)	MILL5	#4 Pebble Mill	100	Pre-1970
76	Stack #10	CF #10	SCREW6	#1 Mill Discharge Screw Conveyor	100	Pre-1970
77	Stack #10	CF #10	AIRSD7	Airslide for #2 Mill discharge	100	Pre-1970
78.1	Stack #11	CF #11	SCREW7	#3 Mill Discharge Screw Conveyor	100	Pre-1970
79.1	Stack #11	CF #11	AIRSD8	Airslide for #4 Mill discharge	100	Pre-1970
80	Stack #10	CF #10	ELEV6	#1 Mill Elevator	100	Pre-1970
81	Stack #10	CF #10	ELEV7	#2 Mill Elevator	100	Pre-1970
82.1	Stack #11	CF #11	ELEV8	#3 Mill Elevator	100	Pre-1970
83.1	Stack #11	CF #11	ELEV9	#4 Mill Elevator	100	Pre-1970
84	N/A	N/A (FE)	AIRSE1	#1 Air Separator	100	Pre-1970
85	N/A	N/A (FE)	AIRSE2	#2 Air Separator	100	Pre-1970
86	N/A	N/A (FE)	AIRSE3	#3 Air Separator	100	Pre-1970
87	N/A	N/A (FE)	AIRSE4	#4 Air Separator	100	Pre-1970
88	N/A	N/A (FE)	AIRSD9	Airslide for #1 Separator Feed	100	Pre-1970

**ATTACHMENT D - Title V Equipment Table**  
**(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)**

<b>Process Flow Diagram Number</b>	<b>Emission Point ID</b>	<b>Control Device<sup>1</sup></b>	<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Design Capacity TPY</b>	<b>Year Installed/Modified</b>
89	N/A	N/A (FE)	SCREW16	#3 Air Separator Screw Conveyor	100	Pre-1970
90	N/A	N/A (FE)	SCREW17	#4 Air Separator Screw Conveyor	100	Pre-1970
91	Stack #39	CF #39	ELEV14	#14 Elevator	150	Pre-1970
92	Stack #27	CF #27	Pulverizer Tank #20	#5 and #6 Pebble Mills Feed Silo	150	Pre-1970
93	Stack #12	CF #12	#5 Mill Feed Bin	#5 Mill Feed Bin	100	Pre-1970
94	Stack #12	CF #12	FEEDB5	#5 Pebble Mill Feeder Belt	15	Pre-1970
95	Stack #12	CF #12	MILL6	#5 Pebble Mill	100	Pre-1970
96	N/A	N/A (FE)	AIRSD2	Airslide discharge for #5 Mill	100	Pre-1970
97	Stack #12	CF #12	ELEV10	#5 Mill Elevator	100	Pre-1970
98	N/A	N/A (FE)	AIRSE5	#5 Air Separator	100	Pre-1970
99	N/A	N/A (FE)	SCREW18	#5 Air Separator Screw Conveyor	100	Pre-1970
100	Stack #12	CF #12	#6 Mill Feed Bin	#6 Mill Feed Bin	100	Pre-1970
101	Stack #12	CF #12	FEEDB6	#6 Pebble Mill Feeder Belt	15	Pre-1970
102.1	N/A	N/A (FE)	MILL7	#6 Pebble Mill	100	Pre-1970
103	Stack #12	CF #12	AIRSD3	Airslide discharge for #6 Mill	100	Pre-1970
104	Stack #12	CF #12	ELEV11	#6 Mill Elevator	100	Pre-1970
105	N/A	N/A (FE)	AIRSE6	#6 Air Separator	100	Pre-1970
106	N/A	N/A (FE)	SCREW19	#6 Air Separator Screw Conveyor	100	Pre-1970
108	Stack #41	CF #41	BF1	Microsizer #3 Belt Feeder	20	2005
109.1	Stack #41	CF #41	ELEV 22	Ground Fines Bucket Elevator #1	100	2005
110.1	Stack #41	CF #41	ELEV24	CGS Elevator #2	100	2005
111	Stack #41	CF #41	Screen21	CGS Rotex Screen	25	2005
112.1	Stack #41	CF #41	AIRSD1	Airslide 2 for Ground Fines	100	2005
115	Stack #41	CF #41	Airslide 100	Airslide (2s) for CGS	8	2005
205.1	N/A	N/A (FE)	AIRSD1-GENERIC	Generic EUID for Air Slides	100	N/A
206.1	Stack #12	CF #12	ELEV15	# 9 Bucket Elevator	100	Pre- 1970
207.1	N/A	N/A (FE)	BIN2	Surge Bin	100	Pre-1970
<b>Screening and Unground Sand Processing</b>						
	N/A	N/A (FE)	MOB-CONV	342D Mobile Conveyor	300	2017
	N/A	N/A (FE)	BE-03	Cristobalite Bucket Elevator #3	100	2017
	N/A	N/A (FE)	C Silo	Cristobalite Silo	150	2017

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<b>Process Flow Diagram Number</b>	<b>Emission Point ID</b>	<b>Control Device<sup>1</sup></b>	<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Design Capacity TPY</b>	<b>Year Installed/Modified</b>
55	Stack #7	CF #7	SCREN17 (1E)	#1 Rotex Screen (1S)	50	2012
119	Stack #6	CF #6	BE01 (E2)	Bucket Elevator #1	150	2012
120	Stack #6	CF #6	BE02 (E2)	Bucket Elevator #2	150	2012
121	Stack #6	CF #6	LS01 (FE3)	Dust Suppression Hopper (DSH) System Load out Spout	150	2012
122	Stack #25	CF #25	CONV26	24" #3 Dryer Conveyor	200	Pre-1975
123	Stack #25	CF #25	CONV27	24" #2 Tunnel Conveyor	200	Pre-1975
124	Stack #6	CF #6	ELEV4	#1 Elevator	200	Pre-1975
125	Stack #6	CF #6	VIBFD5	Grasshopper Vibrating Feeder	200	1973
126	Stack #6	CF #6	CONV39-41	#1 to #3 Magnet Rolls	200	Pre-1975
127	Stack #36	CF #36	SCREN7-9 & SCREN14-15 (IE)	#1 through #5 Rotex Screens (1S-5S)	375	1995-1997
128	Stack #6	CF #6	CONV 30	20" Tailings Conveyor	30	Pre-1975
129	Stack #6	CF #6	CONV29	#1 Dry Sand Conveyor	175	Pre-1975
130	Stack #7	CF #7	ELEV2	#3 Elevator	30	Pre-1975
131	Stack #7	CF #7	ELEV1	#2 Elevator	75	Pre-1975
132	Stack #7	CF #7	ELEV3	#4 Elevator	75	Pre-1975
133.1	Stack #7	CF #7	SCREN10-13 & SCREN2-4	SCREN10-13: #71 through #74 Rotex Screens, SCREN2-4: #61 and #62 Rotex Screens and Tyler Hummer Screen	75	Modified 1996 Pre-1975
134	Stack #7	CF #7	CONV31	24" #9 and #10 Tank Conveyor	75	Pre-1975
135	N/A	N/A (FE)	CONV32	24" # 11 and #12 Tank Conveyor	75	Pre-1975
136	N/A	N/A (FE)	CONV36	20" C-10 Conveyor	110	Pre-1975
137	N/A	N/A (FE)	CONV37	20" C-11 Conveyor	110	Pre-1975
138	Stack #7	CF #7	CONV33	24" #1 Pulverizer Tank Belt Conveyor	200	Pre-1975
139	N/A	N/A (FE)	CONV34	24" #2 Pulverizer Tank Belt Conveyor	200	Pre-1975
140	Stack #27	CF #27	CONV51	24" 30 Mesh Loadout Conveyor	200	Pre-1975
141	Stack #40	CF #40	PACKR1	Packaging Machine for Whole Grain Sand	36	Pre-1975
Classification (10/15/30/40 Micron)						
107.1	Stack #42	CF #42	Microsizer #3	MS-20 Microsizer #3	25	2005
142.1	Stack #12	CF #12	AIRSI12	Airslide and #1 MS-20 Microsizer	85	1996
143.1	Stack #11	CF #11	AIRSI13	Airslide and #2 MS-20 Microsizer	85	1996
144	Stack #12	CF #12	Tailing Bins	Tailing Bins	130	Pre-1975
145	Stack #12	CF #12	PNEU2	#1 Macawber Pneumatic Pumping Station	15	1996

**ATTACHMENT D - Title V Equipment Table**  
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Process Flow Diagram Number	Emission Point ID	Control Device <sup>1</sup>	Emission Unit ID	Emission Unit Description	Design Capacity TPY	Year Installed/Modified
146.1	Stack #11	CF #11	PNEU4	#2 Macawber Pneumatic Pumping Station	15	1996
147	Stack #12	CF #12	BIN7	#1 & #2 Pump Feed Bins	15	Pre-1975
148	Stack #12	CF #12	#1 & #2 Pumps	#1 and #2 pneumatic pumps	15	1996
208.1	Stack #42	CF #42	PNEU1	#3 Macawber Pneumatic Pumping Station	15	2017
5 Micron Classification						
151.1	Stack #11	CF #11	ELEV16	5 Micron Feed Elevator (7S)	150	1996
152	Stack #37	CF #37	5 Micron Feed Bin	5 Micron Feed Bin (6S)	150	1996
153	N/A	N/A (FE)	AIRSE8 -16, 18 & 19	Air Separators (8 ea), and #18 and #19	20	1973
154	Stack #37	CF #37	ELEV17	5 Micron Return Elevator (8S)	150	1996
155	Stack #37	CF #37	BIN5	5 Micron Product Feed Bin (1S)	10	1996
156.1	Stack #38	CF #38	BIN4	Bulk Storage Loading Bin(2S)	10	1996
158.1	Stack #38	CF #38	PACKR7	"Stone Container" Bagger (5S)	15	1996
159.1	Stack #13	CF #13	ELEV23	PEMCO Elevator/FCP Tanks and Bulk Loadout Spout (3S1)	100	Pre 1983
160	Stack #20	CF #20	PACKR4	#2 Autobagger and Feed Bin	20	1981
161.1	Stack #20	CF #20	PACKR3	#1 Autobagger and Feed Bin	20	1981
162	Stack #34	CF #34	PACKR5 (1e & 2e)	Bulk Bagger and Feed Bin (1s and 2s)	15	1988
Limestone System						
	FP01	N/A (WS)	STOCK1	Stockpile	~21	2021
	E02	N/A (WS)	CRUSH1	Primary Crusher	~21	2021
	E04	N/A (WS)	CRUSH2	Secondary cone crusher	~21	2021
	E01	N/A (WS)	SCREN1	scalping screener	~21	2021
	E03	N/A (WS)	SCREN2	screener	~21	2021
	E05	N/A (WS)	SCREN3	screener	~21	2021
	TP01	N/A (WS)	TRUCK1	Front end loader feeding scalping screen	~21	2021
	TP02	N/A (WS)	FEEDER1	Screen feeding crusher	~21	2021
	TP03	N/A (WS)	CRUSH1	Crusher onto belt conveyor	~21	2021
	TP04	N/A (WS)	SCREN1	Belt conveyor feeding screener	~21	2021
	TP05	N/A (WS)	SCRENBC1	Conveyor from Screener	~21	2021
	TP06	N/A (WS)	SCRENBC2	Conveyor from Screener	~21	2021
	TP07	N/A (WS)	SCRENBC3	Conveyor from Screener	~21	2021
	TP08	N/A (WS)	STACKBC1	Conveyor belt transfer	~21	2021

**ATTACHMENT D - Title V Equipment Table**  
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<b>Process Flow Diagram Number</b>	<b>Emission Point ID</b>	<b>Control Device<sup>1</sup></b>	<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Design Capacity TPY</b>	<b>Year Installed/Modified</b>
	TP09	N/A (WS)	STACKBC2	Conveyor belt transfer	~21	2021
	TP10	N/A (WS)	CRUSH2	Conveyor belt Feeding Crusher	~21	2021
	TP11	N/A (WS)	CRUSHSCR1	Crushing Feeding Screener	~21	2021
	TP12	N/A (WS)	SCRENBC4	Conveyor from Screener	~21	2021
	TP13	N/A (WS)	SCRENBC5	Conveyor from Screener	~21	2021
	TP14	N/A (WS)	SCRENBC6	Conveyor from Screener	~21	2021
	TP15	N/A (WS)	SCRENBC7	Conveyor from Screener	~21	2021
<b>Storage Structures</b>						
157.1	Stack #38	CF #38	BIN4 SPOUT	Bulk Storage Loading Bin and Loadout Spout (2S)	10	1996
163.1	Stack #7	CF #7	Tank #7 & Tank #8	Storage Tanks #7 and Tank #8 at the New Screen Tower	150	Pre-1948
163.2	Stack #7	CF #7	Tank #15 & Tank #16	Storage Tank #15 and Tank #16 at New Screen Tower	150	Pre-1948
164.1	Stack #7	CF #7	Tanks #13 & #17	Storage tanks #13 and #17 at the New Screen Tower	150	Pre-1970
165	Stack #27	CF #27	Tanks #9 - #12	Storage tanks #9, #10, #11 & #12 at the New Screen Tower	150	Pre-1970
166.1	Stack #7	CF #7	Tanks #14 & #18	Storage tanks #14 and #18 at the New Screen Tower	150	Pre-1970
167	Stack #27	CF #27	Steel Tank #21	Steel Tank at the New Screen Tower	100	Pre-1970
168.1	Stack #13	CF #13	CGS Tank	CGS Tank	800	1998
169	Stack #13	CF #13	PEMCOTank	PEMCO Tank	250	Pre 1983
170	Stack #33	CF #33	Supersil Storage Silos #1 - #4 (1e-4e)	#1 through #4 Silos	125	1984
171	Stack #29	CF #29	MIN-U-SIL storage silo #5 (5e)	#5 Silo	125	1984
172.1	Stack #28	CF #28	MIN-U-SIL storage silos #6 & #7 (6e & E1)	#6 and #7 Silos	100	1984, 1999
172.2	Stack #28	CF #28	MIN-U-SIL storage silo #8 (6e & E1)	#8 Silo	100	1984, 1999
173.1	Stack #9	CF #9	ISTANK18	Concrete Tank at the Float Plant	25	Pre-1970
174	Stack #9	CF #9	Steel Storage Tank	Steel Tank at the Float Plant	25	Pre-1970
175	Stack #27	CF #27	SPOUT1	30 Mesh Loadout Spout (SPOUT1)	150	Pre-1970
176	Stack #27	CF #27	SPOUT2	Dry Sand Loadout Spout (SPOUT2)	150	Pre-1970
177.1	Stack #34	CF #34	SPOUT3	DCL Loadout Spout (SPOUT3)	200	Pre-1970
178	Stack #9	CF #9	SPOUT4	Float Plant Loadout Spout (SPOUT4)	150	Pre-1970
179	Stack #28	CF #28	SPOUT5	10 Micron Loadout Chute (SPOUT5)	150	Pre-1970
180.1	Stack #13	CF #13	SPOUT6	PEMCO/DCL Loadout System (SPOUT6)	250	Pre-1970
181	N/A	N/A (FE)	QROK SPOUTS	Q ROK Bulk Loading Spouts	150	Pre-1970

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<b>Process Flow Diagram Number</b>	<b>Emission Point ID</b>	<b>Control Device<sup>1</sup></b>	<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Design Capacity TPY</b>	<b>Year Installed/Modified</b>
203.1	N/A	N/A	#1 Stone Tank	#1 Stone Tank (Inside Building)	400	Before 1976
204.1	N/A	N/A	#2 Stone Tank	#2 Stone Tank (Inside Building)	400	Before 1976
Miscellaneous						
182	N/A	N/A	Roads	Unpaved Quarry Haul Roads, and Paved and Unpaved Plant Roadways	N/A	Pre-1970
N/A	N/A	N/A	Stockpile	Stockpile	N/A	Pre-1970
	N/A	N/A	Golf Sand Stockpile	Stockpile	N/A	Pre-1970
184	N/A	N/A	Float Sand Stockpile	Stockpile	N/A	Pre-1970
N/A	N/A	N/A	Quarry	Blasting Emissions	N/A	Pre-1970
Liquid Storage Tanks						
185	T1	N/A	Tank No. 1	Diesel Fuel Tank	10000	Before 1976
186	T2	N/A	Tank No. 2	Used Oil Tank at Maintenance garage	275	Before 1976
187	T3	N/A	Tank No. 3	Used Oil Tank at Maintenance garage	275	Before 1976
188	T4	N/A	Tank No. 4	#1 Oil Tank at Maintenance garage	275	Before 1976
189	T5	N/A	Tank No. 5	#2 Oil Tank at Maintenance garage	275	Before 1976
190	T6	N/A	Tank No. 6	#3 Oil Tank at Maintenance garage	275	Before 1976
191	T7	N/A	Tank No. 7	#4 Oil Tank at Maintenance garage	275	Before 1976
192	T8	N/A	Tank No. 8	Recycled Oil Tank near Float Plant	100000	1975
193	T11	N/A	Tank No. 11	Kerosene Tank at C & R Shop	275	1995
194	T12	N/A	Tank No. 12	Gasoline Tank at Office Building	1000	1995
195	T13	N/A	Tank No. 13	Lube Oil Tank at Secondary Crusher	300	Before 1976
196	T16	N/A	Tank No. 16	Recycled Oil	30000	2003
197	T17	N/A	Tank No. 17	Recycled Oil	30000	2003
198	T24	N/A	Tank No. 24	Petroleum Sulfonate (Conditioner) Tank at Float Plant	275	Before 1976
199	T25	N/A	Tank No. 25	Two Propane Tanks at the electric shop 30,000 gallon each	60000	Before 1976
200	T26	N/A	Tank No. 26	Propane Tank at the Quarry	2000	1999
201	T27	N/A	Tank No. 27	Propane Tank at #6 Oil Building	1000	Before 1976
202	T28	N/A	Tank No. 28	Two Propane Tanks at the C&R Shop	1000	Before 1976
N/A	T29	N/A	Tank No. 29	Sodium Hydroxide Tank	8,200	Before 1976
N/A	T30	N/A	Tank No. 30	Sulfuric Acid Tank	6,000	Before 1976
N/A	T31	N/A	Tank No. 31	Floculent Tank	550	Before 1976
N/A	T32	N/A	Tank No. 32	Anti-foam Tank	2,500	Before 1976

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<b>Process Flow Diagram Number</b>	<b>Emission Point ID</b>	<b>Control Device<sup>1</sup></b>	<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Design Capacity TPY</b>	<b>Year Installed/Modified</b>
N/A	T33	N/A	Tank No. 33	Promoter Tank	12,000	Before 1976

<sup>1</sup>For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

**Notes:**

Redlined rows have the revised information immediately below the redlined row with the corresponding process flow ID number and a decimal representing that this row's information has been revised.

Equipment design capacities are in units of tons per hour. Liquid Storage Tank design capacities are in units of gallons.

**Abbreviations:**

FE = Full Enclosure, PE = Partial Enclosure, BE = Building Enclosure, T = Tunnel or Underground, IMC = Inherent Moisture Content(1-5%), MC = Moisture Content, SS = Saturated Sand(60% moisture), WS = Water Spray, WT = Water Truck, MD = Minimized Drop Height, EL = Enclosed Loading Station, WSc = Wet Scrubber, CF = Cartridge Filter.

Attachment E

Emission Unit Forms



<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> VIBFD1, CRUSH2, CONV3, CONV2, CONV1, Reclaim Stockpile	<b>Emission unit name:</b> Primary Crushing Plant	<b>List any control devices associated with this emission unit:</b> CF #1	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Primary Crushing Plant (Stack #1) and associated fugitive emissions			
<b>Manufacturer:</b> NA	<b>Model number:</b> NA	<b>Serial number:</b> NA	
<b>Construction date:</b> Pre-1970	<b>Installation date:</b> Pre-1970	<b>Modification date(s):</b> NA	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 1000 TPH			
<b>Maximum Hourly Throughput:</b> 1000	<b>Maximum Annual Throughput:</b> 8,760,000 TPY	<b>Maximum Operating Schedule:</b> 8760 Hours/Year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? No</b>		<b>If yes, is it?</b>	
<b>Maximum design heat input and/or maximum horsepower rating:</b>		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--

Particulate Matter (PM <sub>2.5</sub> )	--	0.727
Particulate Matter (PM <sub>10</sub> )	--	4.800
Total Particulate Matter (TSP)	--	12.874
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	--
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
ted Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

**Notes:**

Allowable PM Stack Emissions (Type 'a' Source Operation)  
 [45CSR§7-4.1] [Stacks 1, 7, 10, 11, 12, 13, 20, 27, 39, 40, Wsc#2]  
 Total emissions are for all units associated with Primary Crushing process.

***Applicable Requirements***

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

**Applicable Requirements**

6.1.2. The following Non-NSPS Fabric Filter pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the filters to attain the required minimum particulate removal efficiency. Filter pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within 0.1 inch water gauge. An excursion shall be defined as when the filter pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the filter and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0”

According to the CAM plan submitted, the differential pressure gauges for the filters shall be operated continuously during operation of the emission units. [40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stacks #1, 7, 10, 11, 12, 13, 20, 27, 39, 40]

Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

**Monitoring Requirements**

Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1. [45CSR§30-5.1c]

**Testing Requirements**

NA [R30-06500001-2014 (MM01 & MM02) sections 6.3.]

**Recordkeeping Requirements**

Recordkeeping will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.4.1., 3.4.2., 3.4.3 and 3.4.4. [45CSR§30-5.1c]

The monitoring required in R30-06500001-2014 (MM01 & MM02) sections 6.2.2 will be recorded. [45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter and the wet scrubber during operation on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

Qualified personnel shall perform visual inspections of the fabric filters and wet scrubber control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters and wet scrubber. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

General recordkeeping requirements. (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements. [40 C.F.R. §64.9(b); 45CSR§30-5.1.c.]

**Reporting Requirements**

Reporting will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.5.6 and 3.5.8. [45CSR§30-5.1c]

General reporting requirements.

(1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> VIBFD2, CONV4, CONV5, CRUSH3, CONV7, CONV6, CONV8	<b>Emission unit name:</b> Secondary Crushing Plant	<b>List any control devices associated with this emission unit:</b> WSc #2	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Secondary Crushing Plant (Stack #2) and associated fugitive emissions			
<b>Manufacturer:</b> NA	<b>Model number:</b> NA	<b>Serial number:</b> NA	
<b>Construction date:</b> Pre-1970	<b>Installation date:</b> Pre-1970	<b>Modification date(s):</b> NA	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 400			
<b>Maximum Hourly Throughput:</b> 400	<b>Maximum Annual Throughput:</b> 3,504,000 TPY	<b>Maximum Operating Schedule:</b> 8760 Hours/Year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? No</b>		<b>If yes, is it?</b>	
<b>Maximum design heat input and/or maximum horsepower rating:</b>		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
<b>Fuel Type</b>	<b>Max. Sulfur Content</b>	<b>Max. Ash Content</b>	<b>BTU Value</b>

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--

Particulate Matter (PM <sub>2.5</sub> )	--	0.332
Particulate Matter (PM <sub>10</sub> )	--	2.190
Total Particulate Matter (TSP)	--	5.445
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	--
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
ted Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

**Notes:**

Allowable PM Stack Emissions (Type 'a' Source Operation)  
 [45CSR§7-4.1] [Stacks 1, 7, 10, 11, 12, 13, 20, 27, 39, 40, Wsc#2]  
 Total emissions are for all units associated with Secondary Crushing process.

***Applicable Requirements***

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

**Applicable Requirements**

The following scrubber pressure drop range obtained from stack test and historical data is an indicator of compliance for the scrubber to attain the required minimum particulate removal efficiency. Scrubber pressure drop shall be monitored at least once per day. An excursion shall be defined as when the scrubber pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the scrubber and corrective actions shall be taken to return the pressure drop within the following range: Wsc#2, Wet Scrubber: 1.5-7.0 (in H2O)

According to the CAM plan submitted, the pressure drop across the wet scrubber shall be measured continuously during operation of the emission units. [40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Wsc#2]

Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

### **Monitoring Requirements**

Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1. [45CSR§30-5.1c]

6.2.2. The wet scrubber Wsc#2 shall be observed daily during periods of facility operation for a sufficient time interval to determine if the unit has any visible emissions using 40 C.F.R. 60 Appendix A, Method 22. If visible emissions are observed, visible emissions evaluations in accordance with 45CSR§7A shall be conducted as soon as practicable, but no later than one week from the time of the observation. A visible emissions evaluations in accordance with 45CSR7A shall not be required under condition Section 6.2.2 if the visible emissions condition is corrected in a timely manner; the scrubber is operating at normal operating conditions; and, the cause and corrective measures taken are recorded. [45CSR§30-5.1c] [Wsc#2]

### **Testing Requirements**

NA [R30-06500001-2014 (MM01 & MM02) sections 6.3.]

### **Recordkeeping Requirements**

Recordkeeping will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.4.1., 3.4.2., 3.4.3 and 3.4.4. [45CSR§30-5.1c]

The monitoring required in R30-06500001-2014 (MM01 & MM02) sections 6.2.2 will be recorded. [45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter and the wet scrubber during operation on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

Qualified personnel shall perform visual inspections of the fabric filters and wet scrubber control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters and wet scrubber. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

General recordkeeping requirements. (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements. [40 C.F.R. §64.9(b); 45CSR§30-5.1.c.]

### **Reporting Requirements**

Reporting will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.5.6 and 3.5.8. [45CSR§30-5.1c]

General reporting requirements.

(1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

(2) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R.

§70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(iii) A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.



<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> CONV12, CONV13, CONV14, MILL1, CONV15, SCREN1, TANK2, WETSE1 - WETSE5, FERRO1, CLASS4&7, FCell, CONV54, MILL8, PIPE1, CONV18, CONV17, CONV19, CONV20 & CONV22, CONV21, CONV23, CONV24, V1BFD4, DRYER #1 (3s), CONV25, SCREN16	<b>Emission unit name:</b> Wet Processing Plant (Rod Mill Building)	<b>List any control devices associated with this emission unit:</b> WSc #3, CF#25	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Dryers - Fluid Bed Dryer (3S), Stack #3, Wet Processing Plant and associated fugitive emissions.			
<b>Manufacturer:</b> NA	<b>Model number:</b> NA	<b>Serial number:</b> NA	
<b>Construction date:</b> 1975	<b>Installation date:</b> 1975	<b>Modification date(s):</b> NA	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 200			
<b>Maximum Hourly Throughput:</b> 200	<b>Maximum Annual Throughput:</b> 1,752,000 TPY	<b>Maximum Operating Schedule:</b> 8760 Hours/Year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? Yes</b>		<b>If yes, is it?</b> propane, #2 Fuel Oil, #4 Fuel Oil, #5 Fuel Oil, #6 Fuel Oil, natural gas and Recycled Fuel Oil	
<b>Maximum design heat input and/or maximum horsepower rating:</b> 71 MMBtu/hr (HHV)		<b>Type and Btu/hr rating of burners:</b> 71,000,000 Btu/hr (HHV)	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas & Propane	negligible	negligible	1020 BTU/scf
Recycled Fuel Oil	1.5 %	negligible	150,000 BTU/gal
Distillate Oils	1.5 %	negligible	150,000 BTU/gal
Residual Oils	0.2 %	0.05-0.1	140,000 BTU/gal

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	13.750
Nitrogen Oxides (NO <sub>x</sub> )	--	96.350
Lead (Pb)	--	0.210
Particulate Matter (PM <sub>2.5</sub> )	--	76.559
Particulate Matter (PM <sub>10</sub> )	--	96.688
Total Particulate Matter (TSP)	--	98.781
Sulfur Dioxide (SO <sub>2</sub> )	--	267.000
Volatile Organic Compounds (VOC)	--	1.270
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
All	--	2.185
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b>		
<b>Notes:</b>		
Total emissions are for all units associated with Wet Processing Plant.		
Max emissions of each fuel type for Dryer #1 for every specific pollutant to conservatively estimate PTE.		
<b><i>Applicable Requirements</i></b>		

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

**Applicable Requirements**

The Fluid Bed dryer (3S) and the Rotary dryer (8S) shall burn the following fuels: propane, #2 Fuel Oil, #4 Fuel Oil, #5 Fuel Oil, #6 Fuel Oil, natural gas and Recycled Fuel Oil. [45CSR13, R13-0715, A.2] [3S, 8S]

The following sulfur limits shall not be exceeded: #2 Fuel Oil shall have a maximum of 0.2% S by weight. #4, # 5 and #6 Fuel Oil and Recycled oil shall have a maximum of 1.5 % sulfur by weight. [45CSR13, R13-0715, A.3] [3S, 8S]

Combined emissions from the Fluid Bed Dryer (3S) and Rotary Dryer (8S) shall not exceed the following annual limitations in Tons per year (TPY):

Particulate Matter: 95.48

SO<sub>2</sub>: 267.0

NO<sub>x</sub>: 96.35

VOC: 1.27

CO: 13.75

[45CSR13, R13-0715, A.6] [3S, 8S]

The fuel rating of the recycled oil shall not exceed 150,000 BTU/gallon. [45CSR13, R13-0715, A.7] [3S, 8S]

The following conditions shall be followed by the permittee for the use of Recycled Oil as dryer fuel:

a. The registrant shall not receive, store, burn or fire any recycled oil which is considered a hazardous waste or does not meet the used oil specifications below (40 C.F.R. 279.11, Table 1 & Recycled Oil specification provided by U.S.Silica). The burning of recycled oil that does not meet these specifications shall constitute a violation of 45CSR25, 33CSR20 and the requirements, provisions, standards and conditions of this Permit.

**Maximum Allowable Specification**

Arsenic: <5.0 ppm

Cadmium: <2.0 ppm

Chromium:<10.0 ppm

Lead: <100.0 ppm

PCBs: <2.0 ppm

Total Halogen: <1000.0 ppm

Flash Point: >100.0 Degrees F

b. The registrant shall receive a chemical analysis with each shipment or delivery of recycled oil from the supplier or marketer. The analysis shall identify the name and address of the supplier or marketer, the supplier or marketer's USEPA Identification Number and the following used or recycled oil information:

Date of shipment or delivery

Quantity received

Arsenic content

Cadmium content

Chromium content

Lead content

PCB content

Total Halogen content

Flash point

Sulfur content

c. The Director or his or her duly authorized representative may conduct or require the permittee to conduct detailed chemical analyses of any used or recycled oil received, stored or fired in the dryer burner. [45CSR13, R13-0715,

A.9] [3S, 8S]

The permitted facility shall comply with all provisions of 45CSR10, provided that the permittee shall comply with any more stringent requirements as may be set forth under Sections 4.1.1 to 4.1.7, 4.2.1, 4.4.1 to 4.4.4 of the permit. The principal provisions of 45CSR10 are as follows:

§45-10-3.3 - Maximum Allowable Emission Rates for Similar Units in All Priority III Regions Except Region IV.

No person shall cause, suffer, allow, or permit the discharge of sulfur dioxide into the open air from all stacks located at one plant, measured in terms of pounds per hour, in excess of the amount determined as follows:

(3.3.f) - For Type 'b' and Type 'c' fuel burning units, the product of 3.2 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour.

§45-10-3.4.a. - Unless otherwise approved by the Director, the maximum allowable emission rate for an individual stack shall not exceed by more than twenty-five percent (25%) the emission rate determined by prorating the total allowable emission rate based on the basis of individual unit heat input at design capacity for all fuel burning units discharging through that stack.

§45-10-4.1. - No person shall cause, suffer, allow, or permit, the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations.

§45-10-8.2.a. - At the request of the Director the owner and/or operator of a source shall install such stack gas monitoring devices as the Director deems necessary to determine compliance with the provisions of this rule. The data from such devices shall be readily available at the source location or such other reasonable location that the Director may specify. At the request of the Director, or his or her duly authorized representative, such data shall be made available for inspection or copying. Failure to promptly provide such data shall constitute a violation of this rule. [45CSR13, R13-0715, B.4] [3S, 8S]

At such reasonable times as the Director may designate, the owner or operator of any fuel burning unit(s), manufacturing process source(s) or combustion source(s) may be required to conduct or have conducted tests to determine the compliance of such source(s) with the emission limitations of sections 45CSR§§10-3, 4 or 5. Such tests shall be conducted in accordance with the appropriate test method set forth in 40 CFR Part 60, Appendix A, Method 6, Method 15 or other equivalent EPA testing method approved by the Director. The Director, or his or her duly authorized representative, may at his or her option witness or conduct such tests. Should the Director exercise his or her option to conduct such tests, the operator will provide all necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices. [45CSR§10-8.1a] [3S, 8S]

The Director, or his duly authorized representative, may conduct such other tests as he or she may deem necessary to evaluate air pollution emissions other than those noted in section 45CSR§10-3. [45CSR§10-8.1b] [3S, 8S]

The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) shall demonstrate compliance with sections 45CSR§§10-3, 4 and 5 of this rule by testing and /or monitoring in accordance with one or more of the following: 40 CFR Part 60, Appendix A, Method 6, Method 15, continuous emissions monitoring systems (CEMS) or fuel sampling and analysis as set forth in an approved monitoring plan for each emission unit. [45CSR§10-8.2c] [3S, 8S]

Monitoring plans pursuant to subsection 45CSR§10-8.2.c shall be submitted to the Director within six (6) months of the effective date of this rule. Approval or denial of such plans shall be within twelve (12) months of the effective date of this rule. (Monitoring Plan approved on April 25, 2003. Compliance with terms and conditions of 45CSR13, R13-0715F assures compliance with 45CSR10 and 10A ) [45CSR§10-8.2.c.2] [3S, 8S]

The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) subject to sections 45CSR§§10-3, 4 or 5 shall maintain on-site a record of all required monitoring data as established in a monitoring plan pursuant to subdivision 45CSR§10-8.2.c. Such records shall be made available to the Director or his duly authorized representative upon request. Such records shall be retained on-site for a minimum of five years.

[45CSR§10-8.3.a.] [3S, 8S]

The owner or operator shall submit a periodic exception report to the Director, in a manner specified by the Director. Such an exception report shall provide details of all excursions outside the range of measured emissions or monitored parameters established in an approved monitoring plan and shall include, but not be limited to, the time of the excursion, the magnitude of the excursion, the duration of the excursion, the cause of the excursion and the corrective action taken. [45CSR§10-8.3.b.] [3S, 8S]

The following scrubber pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the scrubber to attain the required minimum particulate removal efficiency. Scrubber pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within 0.1 inch water gauge. An excursion shall be defined as when the scrubber pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the scrubber and corrective actions shall be taken to return the pressure drop within the following range: 3S: 2.0 to 5.8 (in H<sub>2</sub>O) 8S: 0.5 to 2.0 (in H<sub>2</sub>O)

According to the CAM plan submitted, the pressure gauges on the scrubbers shall be operated continuously during operation of the dryers.

[40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [3S, 8S]

5.1.6.2. In accordance with the requirements of 40CFR60, Subpart OOO, the maximum particulate (PM) emissions from air pollution control device CF#25 shall not exceed 0.022 grains per dry standard cubic foot (0.05 grams per dry standard meter). [45CSR13, R13-2015, A.2] [Stack # 25]

5.1.6.3. The maximum hourly and annual rate of sand to the Trash Vibrating Conveyor (SCREEN), Equipment ID No. TS1(SCREEN 16), shall not exceed 220.0 tons/hour and 1,927,200 tons/year. [45CSR13, R13-2015, A.3] [SCREEN16]

5.1.6.4. The Trash Vibrating Conveyor (SCREEN), Equipment ID No. TS1, shall be controlled at all times of operation with a cartridge filter, Control Equipment ID No. CF#25. [45CSR13, R13-2015, A.4] [CF#25]

5.1.6.5. The permittee shall operate the cartridge filter, Control Equipment ID No.CF#25, as outlined in Permit Application R13-2015. [45CSR13, R13-2015, A.5] [CF#25]

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**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

#### **Monitoring Requirements**

Compliance with Section 3 of 45CSR7 shall be determined by conducting daily visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for the scrubber. These observations shall be conducted during periods of normal facility operation for a sufficient time interval to determine if the unit has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22. If sources of visible emissions are identified during the survey, the permittee shall conduct an opacity evaluation as outlined in 45CSR7A-2.1.a,b, within 24 hours. A 45CSR7A-2.1.a,b evaluation shall not be required if the visible emission condition is corrected in a timely manner and the units are operated at normal operating conditions with no visible emissions being observed.

Records shall be maintained on site reporting the results of each test. Said opacity evaluations of sources identified during the Method 22 survey shall only be conducted by an employee or contractor certified in 40CFR60 Appendix A, Method 9, Visible Emission observations. Upon observing any visible emissions in excess of twenty percent (20%) opacity, or excess of forty (40%) for any period or periods aggregating more than five (5) minutes in any sixty (60) minute period, the Company shall submit a written report, certified by a responsible official, to the Director of the Division of Air Quality within five (5) days after taking said reading. When in compliance on a daily basis for four (4) consecutive weeks, then the observation frequency shall be decreased to a once-a-week sampling schedule. If an exceedance of the opacity limit is measured, then the observation frequency shall be reverted to the once-a-day sampling schedule. [45CSR13, R13-0715, A.12] [3S, 8S]

The Fluid Bed Dryer and the Rotary dryer shall be observed visually at least each calendar week during periods of normal facility operation for a sufficient time interval to determine if the unit has any visible emissions using 40C.F.R.Part 60 Appendix A, Method 22. If visible emissions from any of the emissions units are observed during these weekly observations, or at any other time, visible emissions evaluations in accordance with 40C.F.R. 60

Appendix A, Method 9 shall be conducted as soon as practicable, but no later than one (1) month from the time of the observation. However, a Method 9 evaluation shall not be required if the visible emissions condition is corrected in a timely manner; the emissions unit is operating at normal operating conditions; and, the cause and corrective measures taken are recorded. [45CSR13, R13-0715, A.13] [3S, 8S]

Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1.[45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF #6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 &42]

### Testing Requirements

Tests that are required by the Director to determine compliance with the emission limitations set forth in 4.1.4 and 4.1.5 of this permit shall be conducted in accordance with the methods as set forth below. The Director may require a different test method or approve an alternative method in light of any new technology advancements that may occur. Compliance testing shall be conducted at 100% of the peak load unless otherwise specified by the Director.

a. Tests to determine compliance with PM emission limits shall be conducted in accordance with Method 5, 5A, 5B, 5C, 5D, 5E, 5F, 5G, or 5H as set forth in 40 CFR 60, Appendix A. [45CSR13, R13-0715, B.7] [3S, 8S]

With regard to any testing required by the Director, the permittee shall submit to the Director of the division of Air Quality a test protocol detailing the proposed test methods, the date, and the time the proposed testing is to take place, as well as identifying the sampling locations and other relevant information. The test protocol must be received by the Director no less than thirty (30) days prior to the date the testing is to take place. Test results shall be submitted to the Director no more than sixty (60) days after the date the testing takes place. [45CSR13, R13-0715, B.8] [3S, 8S]

Within 180 days of the permit approval, and once per permit term, the permittee shall conduct or have conducted test(s) on the fluid bed and rotary dryers to determine compliance with the Particulate Matter emission limitations as set forth in Sections 4.1.4 & 4.1.5 above. Such Test(s) shall be conducted in accordance with Sections 4.3.1 and 4.3.2 contained herein. The Director, or a duly authorized representative, may witness or conduct such tests. Should the Director exercise this option to conduct such test(s), the operator shall provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices. [45CSR§30-5.1c] [3S, 8S]

**Note: Rotary Dryer tested – 12-18-2012 (not operational since 2014), Fluid Bed Dryer tested – 08-02-2017.**

The owner or operator shall determine compliance with the particulate matter standards in R30-06500001-2014 (MM01 & MM02) Section 5.1.1(a) according to Test method and Procedures in 40 C.F.R. §60.675. [40 C.F.R. §60.675; 45CSR16]

### Recordkeeping Requirements

Records of quantity and type of fuel used, and the fuel sulfur content analysis shall be retained on-site by the permittee for at least five (5) years. [45CSR13, R13-0715, A.4] [3S, 8S]

Compliance with annual limitations of SO<sub>2</sub>, NO<sub>x</sub>, VOC and CO in Section 4.1.5 shall be demonstrated by recordkeeping of monthly fuel use reports and fuel usage limitations conforming to the following equations. Records will be maintained on-site for at least five years and shall be submitted to the Director upon request.

SO<sub>2</sub>:  $142 F_2 S_2 + 150 F_4 S_4 + 157 F_5 S_5 + 157 F_6 S_6 + 147 FR SR = 534,000$  lbs/yr of SO<sub>2</sub>

NO<sub>x</sub>:  $20 F_2 + 20 F_4 + 55 F_5 + 55 F_6 + 19 FR + 100N + 19 P = 192,700$  lbs/yr of NO<sub>x</sub>

CO:  $5 F_2 + 5 F_4 + 5 F_5 + 5 F_6 + 5 FR + 84 N + 3.2 P = 27,507$  lbs/yr of CO

VOC:  $0.2 F_2 + 0.2 F_4 + 0.28 F_5 + 0.28 F_6 + 0.22 FR + 5.5 N + 0.3 P = 2,541$  lbs/yr of VOC

Where:

F<sub>2</sub> = #2 Fuel Oil use, in 1000 gallons, for last twelve month period

F<sub>4</sub> = #4 Fuel Oil use, in 1000 gallons, for last twelve month period

F<sub>5</sub> = #5 Fuel Oil use, in 1000 gallons, for last twelve month period

F<sub>6</sub> = #6 Fuel Oil use, in 1000 gallons, for last twelve month period

FR = Recycled Fuel Oil use, in 1000 gallons, for last twelve month period

P = Propane use, in 1000 gallons, for last twelve month period

N = Natural gas use, in million cubic feet of gas, for last twelve month period

S<sub>2</sub> = Weighted average sulfur content of all #2 Fuel Oil used in last twelve month period (by weight) S<sub>4</sub>

= Weighted average sulfur content of all #4 Fuel Oil used in last twelve month period (by weight) S5 =  
Weighted average sulfur content of all #5 Fuel Oil used in last twelve month period (by weight) S6 =  
Weighted average sulfur content of all #6 Fuel Oil used in last twelve month period (by weight) SR =  
Weighted average sulfur content of all Recycled Oil used in last twelve month period (by weight)  
[45CSR13, R13-0715, A.8] [3S, 8S]

Records of each shipment of recycled oil chemical analyses, quantity and type of fuel used, maximum fuel rating (BTU/gallon), and the fuel sulfur analysis shall be retained on-site by the permittee for at least five (5) years. The owner or operator shall keep record of quality control and quality assurance program for the fuel analysis. If a certified lab is used to provide the fuel analysis, the quality control and assurance program is deemed to be satisfactory. The permittee will confirm the certified lab fuel analysis results by using an independent certified lab at least once in every six months to analyze the fuel. [45CSR13, R13-0715, A.10] [3S, 8S]

The permittee shall monitor and record the pressure drop across each scrubber (during operation) on a daily basis. These records shall be kept on site for a minimum of 5 years and made available to the Director or Authorized Representative upon request. [45CSR13, R13-0715, A.11] [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [3S, 8S]

Qualified personnel shall perform visual inspections of the scrubbers at least monthly and perform routine maintenance to assure proper operation of the scrubbers. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [3S, 8S]

General recordkeeping requirements.

(1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements.  
[40 C.F.R. §64.9(b); 45CSR§30-5.1.c.] [3S, 8S]

5.4.7. For the purpose of determining compliance with the emission limits as set forth in Sections 5.1.6.1 and 5.1.6.2, the permittee shall maintain all records that are required herein. Said records shall be maintained on site for a period of five (5) years and shall be made available to the Director or his/her duly authorized representative upon request.  
**[45CSR13, R13-2015, B.1] [Stack # 25]**

5.4.8. For the purpose of determining compliance with the process weight rate limitations set forth in Section 5.1.6.3 the permittee shall maintain monthly and annual records on the processing rate of sand to the Trash Vibrating Screen. Compliance with the monthly and annual process weight rate limits shall be determined using a rolling yearly total. A rolling yearly total shall mean the sum of the process weight rate at any given time for the previous twelve (12) consecutive months. Said records shall be maintained on site for a period of five (5) years. Certified copies of said records shall be made available to the Director or his/her duly authorized representative upon request. The monthly and annual sand processing records may be maintained using the U.S.Silica Company computerized Production Tracking Data System (PTDS)  
**[45CSR13, R13-2015, B.2] [SCREN16]**

5.4.9. For the purpose of determining compliance with the conditions set forth in Section 5.1.6.4, the permittee shall maintain certified annual records that contain at a minimum the following:  
Hours of Operation when the Trash Vibrating Screen is operating without the required control device (Cartridge Filter). Said records shall be maintained on site for a period of five (5) years. Certified copies of these records shall be made available to the Director or his/her duly authorized representative upon request.  
**[45CSR13, R13-2015, B.3] [CF#25]**

5.4.10. For the purpose of determining compliance with the conditions set forth in Section 5.1.6.5, the permittee shall meet the following requirements for the control device CF#25:  
a. Maintenance records shall be maintained on site for a period of five (5) years. Certified copies of said records shall be made available to the Director or his/her duly authorized representative upon request.  
b. Malfunctions shall be documented in writing and records of these malfunctions maintained at the facility for a period of five (5) years. Certified copies of said records shall be made available to the Director or his/her duly authorized representative upon request. At minimum, the following information shall be documented for each malfunction:

1. The cause of malfunction
2. Steps taken to:
  - correct the malfunction
  - minimize emissions during malfunction
3. The duration of the malfunction in hours.
4. The estimated increase in emissions during the malfunction.
5. Any changes/modifications made to equipment and/or procedures that will help prevent future recurrence of the malfunction.

[45CSR13, R13-2015, B.4] [CF#25]

5.4.11. The permittee shall keep records of monitoring requirements of Section 5.2 as specified in Sections 3.4.1, 3.4.2.  
[45CSR§30-5.1c]

5.4.12. The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis.

[40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.13. Qualified personnel shall perform visual inspections of the fabric filters control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters. The results of inspection and performance of routine maintenance shall be recorded.

[40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.14. *General recordkeeping requirements.* (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

[40 C.F.R. §64.9(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

### **Reporting Requirements**

General reporting requirements.

(1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R.

§70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R.

§64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.] [3S, 8S]

5.5.1. Reserved.

5.5.2. (a) *General reporting requirements.* (1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

(2) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R.

§70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;



(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(iii) A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> Slurry Pumps, CYCLO4 & CYCLO5, FERRO2, CYCLO3, Drain Shed, CONV46, CONV47, CLASS5, Conditioner, Floatation, Vacuum Table, CONV48, CONV50, CONV49, DRYER #2 (8S), SCREW21, ELEV19, SCREN18 (1E), SCREW22, ELEV20, PACKR8 (1E)		<b>Emission unit name:</b> Wet Float Plant	
		<b>List any control devices associated with this emission unit:</b> WSc #8, CF #9	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Rotary Dryer (8S), Stack #8, Wet Float Plant, and associated fugitive emissions.			
<b>Manufacturer:</b> In House		<b>Model number:</b> NA	
		<b>Serial number:</b>	
<b>Construction date:</b> Pre-1970		<b>Installation date:</b> Pre-1970	
		<b>Modification date(s):</b> NA	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 25 TPH			
<b>Maximum Hourly Throughput:</b> 25		<b>Maximum Annual Throughput:</b> 219,000	
		<b>Maximum Operating Schedule:</b> 8760 Hours/Year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? Yes</b>		<b>If yes, is it?</b> propane, #2 Fuel Oil, #4 Fuel Oil, #5 Fuel Oil, #6 Fuel Oil, natural gas and Recycled Fuel Oil	
<b>Maximum design heat input and/or maximum horsepower rating:</b> 17.1 MMBtu/hr		<b>Type and Btu/hr rating of burners:</b> 17,000,000 Btu/hr	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Fuel Type	Max. Sulfur Content
Propane	negligible	Propane	negligible

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	13.750
Nitrogen Oxides (NO <sub>x</sub> )	--	96.350
Lead (Pb)	--	0.000
Particulate Matter (PM <sub>2.5</sub> )	--	78.804
Particulate Matter (PM <sub>10</sub> )	--	98.610
Total Particulate Matter (TSP)	--	98.840
Sulfur Dioxide (SO <sub>2</sub> )		267.000
Volatile Organic Compounds (VOC)		1.270
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
All	--	0.138
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p><b>Notes:</b>  Total emissions are for all units associated with Wet Float Plant.  Annual emission rate based on 8,760 hours of operation per year.</p>		
<b><i>Applicable Requirements</i></b>		

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

### **Applicable Requirements**

The Fluid Bed dryer (3S) and the Rotary dryer (8S) shall burn the following fuels: propane, #2 Fuel Oil, #4 Fuel Oil, #5 Fuel Oil, #6 Fuel Oil, natural gas and Recycled Fuel Oil. [45CSR13, R13-0715, A.2] [3S, 8S]

The following sulfur limits shall not be exceeded: #2 Fuel Oil shall have a maximum of 0.2% S by weight. #4, #5 and #6 Fuel Oil and Recycled oil shall have a maximum of 1.5 % sulfur by weight. [45CSR13, R13-0715, A.3] [3S, 8S]

Combined emissions from the Fluid Bed Dryer (3S) and Rotary Dryer (8S) shall not exceed the following annual limitations in Tons per year (TPY):

Particulate Matter: 95.48

SO<sub>2</sub>: 267.0

NO<sub>x</sub>: 96.35

VOC: 1.27

CO: 13.75

[45CSR13, R13-0715, A.6] [3S, 8S]

The fuel rating of the recycled oil shall not exceed 150,000 BTU/gallon. [45CSR13, R13-0715, A.7] [3S, 8S]

The following conditions shall be followed by the permittee for the use of Recycled Oil as dryer fuel:

c. The registrant shall not receive, store, burn or fire any recycled oil which is considered a hazardous waste or does not meet the used oil specifications below (40 C.F.R. 279.11, Table 1 & Recycled Oil specification provided by U.S.Silica). The burning of recycled oil that does not meet these specifications shall constitute a violation of 45CSR25, 33CSR20 and the requirements, provisions, standards and conditions of this Permit.

Maximum Allowable Specification Arsenic: <5.0 ppm

Cadmium: <2.0 ppm Chromium:<10.0 ppm Lead: <100.0 ppm

PCBs: <2.0 ppm

Total Halogen: <1000.0 ppm Flash Point: >100.0 Degrees F

d. The registrant shall receive a chemical analysis with each shipment or delivery of recycled oil from the supplier or marketer. The analysis shall identify the name and address of the supplier or marketer, the supplier or marketer's USEPA Identification Number and the following used or recycled oil information:

xi. Date of shipment or delivery

xii. Quantity received

xiii. Arsenic content

xiv. Cadmium content

xv. Chromium content

xvi. Lead content

xvii. PCB content

xviii. Total Halogen content

xix. Flash point

xx. Sulfur content

c. The Director or his or her duly authorized representative may conduct or require the permittee to conduct detailed chemical analyses of any used or recycled oil received, stored or fired in the dryer burner. [45CSR13, R13-0715, A.9] [3S, 8S]

The permitted facility shall comply with all provisions of 45CSR10, provided that the permittee shall comply with any more stringent requirements as may be set forth under Sections 4.1.1 to 4.1.7, 4.2.1, 4.4.1 to 4.4.4 of the permit. The principal provisions of 45CSR10 are as follows:

§45-10-3.3 - Maximum Allowable Emission Rates for Similar Units in All Priority III Regions Except Region IV. No person shall cause, suffer, allow, or permit the discharge of sulfur dioxide into the open air from all stacks located at one plant, measured in terms of pounds per hour, in excess of the amount determined as follows:

(3.3.f) - For Type 'b' and Type 'c' fuel burning units, the product of 3.2 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour.

§45-10-3.4.a. - Unless otherwise approved by the Director, the maximum allowable emission rate for an individual stack shall not exceed by more than twenty-five percent (25%) the emission rate determined by prorating the total allowable emission rate based on the basis of individual unit heat input at design capacity for all fuel burning units discharging through that stack.

§45-10-4.1. - No person shall cause, suffer, allow, or permit, the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations.

§45-10-8.2.a. - At the request of the Director the owner and/or operator of a source shall install such stack gas monitoring devices as the Director deems necessary to determine compliance with the provisions of this rule. The data from such devices shall be readily available at the source location or such other reasonable location that the Director may specify. At the request of the Director, or his or her duly authorized representative, such data shall be made available for inspection or copying. Failure to promptly provide such data shall constitute a violation of this rule. [45CSR13, R13-0715, B.4] [3S, 8S]

At such reasonable times as the Director may designate, the owner or operator of any fuel burning unit(s), manufacturing process source(s) or combustion source(s) may be required to conduct or have conducted tests to determine the compliance of such source(s) with the emission limitations of sections 45CSR§§10-3, 4 or 5. Such tests shall be conducted in accordance with the appropriate test method set forth in 40 CFR Part 60, Appendix A, Method 6, Method 15 or other equivalent EPA testing method approved by the Director. The Director, or his or her duly authorized representative, may at his or her option witness or conduct such tests. Should the Director exercise his or her option to conduct such tests, the operator will provide all necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices. [45CSR§10-8.1a] [3S, 8S]

The Director, or his duly authorized representative, may conduct such other tests as he or she may deem necessary to evaluate air pollution emissions other than those noted in section 45CSR§10-3. [45CSR§10-8.1b] [3S, 8S]

The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) shall demonstrate compliance with sections 45CSR§§10-3, 4 and 5 of this rule by testing and /or monitoring in accordance with one or more of the following: 40 CFR Part 60, Appendix A, Method 6, Method 15, continuous emissions monitoring systems (CEMS) or fuel sampling and analysis as set forth in an approved monitoring plan for each emission unit. [45CSR§10-8.2c] [3S, 8S]

Monitoring plans pursuant to subsection 45CSR§10-8.2.c shall be submitted to the Director within six (6) months of the effective date of this rule. Approval or denial of such plans shall be within twelve (12) months of the effective date of this rule. (Monitoring Plan approved on April 25, 2003. Compliance with terms and conditions of 45CSR13, R13-0715F assures compliance with 45CSR10 and 10A ) [45CSR§10-8.2.c.2] [3S, 8S]

The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) subject to sections 45CSR§§10-3, 4 or 5 shall maintain on-site a record of all required monitoring data as established in a monitoring plan pursuant to subdivision 45CSR§10-8.2.c. Such records shall be made available to the Director or his duly authorized representative upon request. Such records shall be retained on-site for a minimum of five years. [45CSR§10-8.3.a.] [3S, 8S]

The owner or operator shall submit a periodic exception report to the Director, in a manner specified by the Director. Such an exception report shall provide details of all excursions outside the range of measured emissions or monitored parameters established in an approved monitoring plan and shall include, but not be limited to, the time of the excursion, the magnitude of the excursion, the duration of the excursion, the cause of the excursion and the corrective action taken. [45CSR§10-8.3.b.] [3S, 8S]

The following scrubber pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the scrubber to attain the required minimum particulate removal efficiency. Scrubber pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within  $\pm 0.1$  inch water gauge. An excursion shall be defined as when the scrubber pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the scrubber and corrective actions shall be taken to return the pressure drop within the following range: 3S: 2.0 to 5.8 (in H<sub>2</sub>O) 8S: 0.5 to 2.0 (in H<sub>2</sub>O)

According to the CAM plan submitted, the pressure gauges on the scrubbers shall be operated continuously during operation of the dryers.

[40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [3S, 8S]

5.1.9.1. The maximum hourly and annual processing rates of sand through the bulk sand bagger shall not exceed 30 TPH and 262,800 TPY, based on 8,760 hours of operation per year.

[45CSR13, R13-2299, A.1] [PACKR8]

5.1.9.2. The permittee shall operate the air pollution control device, the Torit Model Number 4DF32-155 Pulse Type Cartridge Dust Collector (Equipment ID No. 1C; Emission Point ID No. 1E - Stack #9), as outlined in Permit Application R13-2299.

[45CSR13, R13-2299, A.2] [Stack # 9]

5.1.9.3. In accordance with the requirements of 40 CFR 60, Subpart OOO, the maximum particulate (PM) emissions from the air pollution control device, the Torit Model Number 4DF32-155 Pulse Type Cartridge Dust Collector (Emission Point ID No. 1E - Stack #9), shall not exceed 0.022 grains per dry standard cubic foot (0.05 grams/dry standard meter).

[45CSR13, R13-2299, A.3; 40 C.F.R. § 60.672; 45CSR16] [Stack # 9]

Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

#### **Monitoring Requirements**

Compliance with Section 3 of 45CSR7 shall be determined by conducting daily visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for the scrubber. These observations shall be conducted during periods of normal facility operation for a sufficient time interval to determine if the unit has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22. If sources of visible emissions are identified during the survey, the permittee shall conduct an opacity evaluation as outlined in 45CSR7A-2.1.a,b, within 24 hours. A 45CSR7A-2.1.a,b evaluation shall not be required if the visible emission condition is corrected in a timely manner and the units are operated at normal operating conditions with no visible emissions being observed.

Records shall be maintained on site reporting the results of each test. Said opacity evaluations of sources identified during the Method 22 survey shall only be conducted by an employee or contractor certified in 40CFR60 Appendix A, Method 9, Visible Emission observations. Upon observing any visible emissions in excess of twenty percent (20%) opacity, or excess of forty (40%) for any period or periods aggregating more than five (5) minutes in any sixty (60) minute period, the Company shall submit a written report, certified by a responsible official, to the Director of the Division of Air Quality within five (5) days after taking said reading. When in compliance on a daily basis for four (4) consecutive weeks, then the observation frequency shall be decreased to a once-a-week sampling schedule. If an exceedance of the opacity limit is measured, then the observation frequency shall be reverted to the once-a-day sampling schedule. [45CSR13, R13-0715, A.12] [3S, 8S]

The Fluid Bed Dryer and the Rotary dryer shall be observed visually at least each calendar week during periods of normal facility operation for a sufficient time interval to determine if the unit has any visible emissions using 40C.F.R.Part 60 Appendix A, Method 22. If visible emissions from any of the emissions units are observed during these weekly observations, or at any other time, visible emissions evaluations in accordance with 40C.F.R. 60 Appendix A, Method 9 shall be conducted as soon as practicable, but no later than one (1) month from the time of the observation. However, a Method 9 evaluation shall not be required if the visible emissions condition is corrected in a timely manner; the emissions unit is operating at normal operating conditions; and, the cause and corrective measures taken are recorded. [45CSR13, R13-0715, A.13] [3S, 8S]

Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1. [45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 9, 25, 28, 29, 33, 34, 36, 37, 38 & 41]

Qualified personnel shall perform visual inspections of the fabric filters control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 9, 25, 28, 29, 33, 34, 36, 37, 38 & 41]

### Testing Requirements

Tests that are required by the Director to determine compliance with the emission limitations set forth in 4.1.4 and 4.1.5 of this permit shall be conducted in accordance with the methods as set forth below. The Director may require a different test method or approve an alternative method in light of any new technology advancements that may occur. Compliance testing shall be conducted at 100% of the peak load unless otherwise specified by the Director.

a. Tests to determine compliance with PM emission limits shall be conducted in accordance with Method 5, 5A, 5B, 5C, 5D, 5E, 5F, 5G, or 5H as set forth in 40 CFR 60, Appendix A. [45CSR13, R13-0715, B.7] [3S, 8S]

With regard to any testing required by the Director, the permittee shall submit to the Director of the division of Air Quality a test protocol detailing the proposed test methods, the date, and the time the proposed testing is to take place, as well as identifying the sampling locations and other relevant information. The test protocol must be received by the Director no less than thirty (30) days prior to the date the testing is to take place. Test results shall be submitted to the Director no more than sixty (60) days after the date the testing takes place. [45CSR13, R13-0715, B.8] [3S, 8S]

Within 180 days of the permit approval, and once per permit term, the permittee shall conduct or have conducted test(s) on the fluid bed and rotary dryers to determine compliance with the Particulate Matter emission limitations as set forth in Sections 4.1.4 & 4.1.5 above. Such Test(s) shall be conducted in accordance with Sections 4.3.1 and 4.3.2 contained herein. The Director, or a duly authorized representative, may witness or conduct such tests. Should the Director exercise this option to conduct such test(s), the operator shall provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices. [45CSR§30-5.1.c] [3S, 8S]

**Note: Rotary Dryer tested – 12-18-2012 (not operational since 2014), Fluid Bed Dryer tested – 08-02-2017.**

The owner or operator shall determine compliance with the particulate matter standards in R30-06500001-2014 (SM01) Section 5.1.1(a) according to Test method and Procedures in 40 C.F.R. §60.675. [40 C.F.R. §60.675; 45CSR16]

### Recordkeeping Requirements

Records of quantity and type of fuel used, and the fuel sulfur content analysis shall be retained on-site by the permittee for at least five (5) years. [45CSR13, R13-0715, A.4] [3S, 8S]

Compliance with annual limitations of SO<sub>2</sub>, NO<sub>x</sub>, VOC and CO in Section 4.1.5 shall be demonstrated by recordkeeping of monthly fuel use reports and fuel usage limitations conforming to the following equations. Records will be maintained on-site for at least five years and shall be submitted to the Director upon request.

SO<sub>2</sub>:  $142 F_2 S_2 + 150 F_4 S_4 + 157 F_5 S_5 + 157 F_6 S_6 + 147 FR SR = 534,000$  lbs/yr of SO<sub>2</sub> NO<sub>x</sub>

:  $20 F_2 + 20 F_4 + 55 F_5 + 55 F_6 + 19 FR + 100N + 19 P = 192,700$  lbs/yr of NO<sub>x</sub>

CO:  $5 F_2 + 5 F_4 + 5 F_5 + 5 F_6 + 5 FR + 84 N + 3.2 P = 27,507$  lbs/yr of CO

VOC:  $0.2 F_2 + 0.2 F_4 + 0.28 F_5 + 0.28 F_6 + 0.22 FR + 5.5 N + 0.3 P = 2,541$  lbs/yr of VOC

Where:

F<sub>2</sub> = #2 Fuel Oil use, in 1000 gallons, for last twelve month period

F<sub>4</sub> = #4 Fuel Oil use, in 1000 gallons, for last twelve month period

F<sub>5</sub> = #5 Fuel Oil use, in 1000 gallons, for last twelve month period

F<sub>6</sub> = #6 Fuel Oil use, in 1000 gallons, for last twelve month period

FR = Recycled Fuel Oil use, in 1000 gallons, for last twelve month period

P = Propane use, in 1000 gallons, for last twelve month period

N = Natural gas use, in million cubic feet of gas, for last twelve month period

S<sub>2</sub> = Weighted average sulfur content of all #2 Fuel Oil used in last twelve month period (by weight) S<sub>4</sub>

= Weighted average sulfur content of all #4 Fuel Oil used in last twelve month period (by weight) S<sub>5</sub> =

Weighted average sulfur content of all #5 Fuel Oil used in last twelve month period (by weight) S<sub>6</sub> =

Weighted average sulfur content of all #6 Fuel Oil used in last twelve month period (by weight) SR =  
Weighted average sulfur content of all Recycled Oil used in last twelve month period (by weight)  
[45CSR13, R13-0715, A.8] [3S, 8S]

Records of each shipment of recycled oil chemical analyses, quantity and type of fuel used, maximum fuel rating (BTU/gallon), and the fuel sulfur analysis shall be retained on-site by the permittee for at least five (5) years. The owner or operator shall keep record of quality control and quality assurance program for the fuel analysis. If a certified lab is used to provide the fuel analysis, the quality control and assurance program is deemed to be satisfactory. The permittee will confirm the certified lab fuel analysis results by using an independent certified lab at least once in every six months to analyze the fuel. [45CSR13, R13-0715, A.10] [3S, 8S]

The permittee shall monitor and record the pressure drop across each scrubber (during operation) on a daily basis. These records shall be kept on site for a minimum of 5 years and made available to the Director or Authorized Representative upon request. [45CSR13, R13-0715, A.11] [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [3S, 8S]

Qualified personnel shall perform visual inspections of the scrubbers at least monthly and perform routine maintenance to assure proper operation of the scrubbers. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [3S, 8S]

General recordkeeping requirements.

(1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements. [40 C.F.R. §64.9(b); 45CSR§30-5.1.c.] [3S, 8S]

For the #9 Torit Model No. 4DF32-155 Pulse Type Cartridge Dust Collector (Equipment ID No. 1C-CF#9):

a. Maintenance records shall be maintained on site for a period of five (5) years. Certified copies of these records shall be made available to the Director or his duly authorized representative upon request.

b. Malfunctions shall be documented in writing and records of these malfunctions maintained at the facility for a period of 5 years. Certified copies of these records shall be made available to the Director or his duly authorized representative upon request. At minimum, the following information shall be documented for each malfunction:

- The cause of malfunction.
- Steps taken to:
  - correct the malfunction.
  - minimize emissions during malfunction.
- The duration of the malfunction in hours.
- The estimated increase in emissions during the malfunction.
- Any changes/modifications made to equipment and/or procedures that will help prevent future recurrence of the malfunction.

[45CSR13, R13-2423, B.5] [CF#9]

5.4.11. The permittee shall keep records of monitoring requirements of Section 5.2 as specified in Sections 3.4.1, 3.4.2. [45CSR§30-5.1c]

5.4.12. The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.13. Qualified personnel shall perform visual inspections of the fabric filters control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]



5.4.14. *General recordkeeping requirements.* (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

[40 C.F.R. §64.9(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

### **Reporting Requirements**

General reporting requirements.

(3) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R.

§64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.] [3S, 8S]

5.5.2. (a) *General reporting requirements.* (1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

(2) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(iii) A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8.

Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> MOB-CONV, BE-03, C Silo, SCREN17 (1E), BE01 (E2), BE02 (E2), LS01 (FE3), CONV26, CONV27, ELEV4, VIBFD5, CONV39-41, SCREN7-9 & SCREN14-15 (1E), CONV 30, CONV29, ELEV2, ELEV1, ELEV3, SCREN10-13 & SCREN2-4, CONV31, CONV32, CONV36, CONV37, CONV33, CONV34, CONV51, PACKR1		<b>Emission unit name:</b> Screening and Unground Sand Processing	
		<b>List any control devices associated with this emission unit:</b> CF #6, CF #7, CF #25, CF #27, CF#36, CF#40	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Screening and Unground Sand Processing and associated fugitive emissions.			
<b>Manufacturer:</b> N/A		<b>Model number:</b> N/A	
		<b>Serial number:</b> NA	
<b>Construction date:</b> Pre-1975		<b>Installation date:</b> Pre-1975	
		<b>Modification date(s):</b> 2012	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 200 TPH			
<b>Maximum Hourly Throughput:</b> 200		<b>Maximum Annual Throughput:</b> 1,752,000 TPY	
		<b>Maximum Operating Schedule:</b> 8760 Hours/Year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> No			<b>If yes, is it?</b>
<b>Maximum design heat input and/or maximum horsepower rating:</b>			<b>Type and Btu/hr rating of burners:</b>
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
<b>Fuel Type</b>	<b>Max. Sulfur Content</b>	<b>Max. Ash Content</b>	<b>BTU Value</b>

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--
Particulate Matter (PM <sub>2.5</sub> )	--	13.436
Particulate Matter (PM <sub>10</sub> )	--	18.472
Total Particulate Matter (TSP)	--	22.048
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	--
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
Other Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p><b>Notes:</b>  PM emissions from Stack #6 shall not exhibit PM greater than 0.014 grains per dry standard cubic foot of exhaust. [40 C.F.R. §60.672(a) &amp; Table 2 of Subpart OOO; 45CSR16; 45CSR§7-4.1.] Compliance with the concentration limit in R30-06500001-2014 (MM01 &amp; MM02) in 5.1.7.1.c. ensures compliance with 45CSR§7-4.1.  Allowable PM Stack Emissions (Type 'a' Source Operation)  [45CSR§7-4.1] [Stacks 1, 7, 10, 11, 12, 13, 20, 27, 39, 40, Wsc#2  PM emissions from Stack #25 are based on PM not greater than 0.022 grains per dry standard cubic foot of exhaust. [40 C.F.R. §60.672(a) &amp; Table 2 of Subpart OOO; 45CSR16; 45CSR§7-4.1.] Compliance with the concentration limit in R30-06500001-2014 (MM01 &amp; MM02) 5.1.6.2.c. ensures compliance with 45CSR§7-4.1.  PM emissions from Stack #36 are based on PM not greater than 0.14 grains per dry standard cubic foot of exhaust. [40 C.F.R. §60.672(a) &amp; Table 2 of Subpart OOO; 45CSR16; 45CSR§7-4.1.]  Total emissions are for all units associated with Screening and Unground Sand Processing.</p>		
<b><i>Applicable Requirements</i></b>		

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

#### **Applicable Requirements**

Visible emissions from Stack #6 shall not be greater than 7% opacity on a six minute average.

**[40 C.F.R. §60.672(a) & Table 2 of Subpart OOO; 45CSR16; 45CSR§7-3.1.]** *Compliance with the opacity limit in 5.1.7.1.b. ensures compliance with 45CSR§7-3.1.*

c. PM emissions from Stack #6 shall not exhibit PM greater than 0.014 grains per dry standard cubic foot of exhaust.

**[40 C.F.R. §60.672(a) & Table 2 of Subpart OOO; 45CSR16; 45CSR§7-4.1.]** *Compliance with the concentration limit in 5.1.7.1.c. ensures compliance with 45CSR§7-4.1.*

6.1.2. The following Non-NSPS Fabric Filter pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the filters to attain the required minimum particulate removal efficiency. Filter pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within ±0.1 inch water gauge. An excursion shall be defined as when the filter pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the filter and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0”

According to the CAM plan submitted, the differential pressure gauges for the filters shall be operated continuously during operation of the emission units. [40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stacks #1, 7, 10, 11, 12, 13, 20, 27, 39, 40]

5.1.6.2. In accordance with the requirements of 40CFR60, Subpart OOO, the maximum particulate (PM) emissions from air pollution control device CF#25 shall not exceed 0.022 grains per dry standard cubic foot (0.05 grams per dry standard meter). [45CSR13, R13-2015, A.2] [Stack # 25]

5.1.6.3. The maximum hourly and annual rate of sand to the Trash Vibrating Conveyor (SCREEN), Equipment ID No. TS1(SCREEN 16), shall not exceed 220.0 tons/hour and 1,927,200 tons/year. [45CSR13, R13-2015, A.3] [SCREEN16]

5.1.6.4. The Trash Vibrating Conveyor (SCREEN), Equipment ID No. TS1, shall be controlled at all times of operation with a cartridge filter, Control Equipment ID No. CF#25. [45CSR13, R13-2015, A.4] [CF#25]

5.1.6.5. The permittee shall operate the cartridge filter, Control Equipment ID No.CF#25, as outlined in Permit Application R13-2015. [45CSR13, R13-2015, A.5] [CF#25]

5.1.7.2 The following conditions and requirements are specific to the five Rotex Screens:

a. The combined annual processing rate of the five Rotex Screens shall not exceed 3,285,000 tons of sand per year.

b. Fugitive visible emissions from Building #7 (location of the five Rotex Screens) shall not be greater than 10% opacity on a six minute average.

**[45CSR16; 40 C.F.R. §60.672(b) & Table 3 of Subpart OOO; 45CSR§7-3.1.]** *Compliance with the opacity limit in 5.1.7.2.b. ensures compliance with 45CSR§7-3.1.*

c. PM emissions from Stack #36 shall not exhibit PM greater than 0.022 grains per dry standard cubic foot of exhaust.

**[40 C.F.R. §60.672(a) & Table 2 of Subpart OOO; 45CSR16]**

d. Visible emissions from Stack #36 shall not be greater than 7% opacity on a six minute average.

**[40 C.F.R. §60.672(a) & Table 2 of Subpart OOO; 45CSR16]** *Compliance with the opacity limit in 5.1.7.2.d. ensures compliance with 45CSR§7-3.1.*

**[45CSR13, R13-2145, 4.1.2.] (Rotex Screens – 1S-5S)**

**5.1.7.3 Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 of R13-2145C (*i.e.*, CF #36 and CF #6) and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR13, R13-2145, 4.1.3.; 45CSR§13-5.11.]

7.1.1. The following conditions and requirements are specific to the Mobile Conveyor (MOB-CONV), Bucket Elevator (BE-03), and the Cristobalite Silo (C Silo):

The permittee shall meet the following fugitive emissions limit for Bucket Elevator (BE-03) and the transfer points on Mobile Conveyor (MOB-CONV), Cristobalite Silo (C Silo), enclosed truck or railcar loading stations or from any other affected facility (as defined in §§60.670 and 60.671): 7 percent opacity

[45CSR16, 40CFR §60.672(b) and Table 3 to Subpart OOO of 40CFR60; 45CSR13, R13-2145, 5.1.1.]

Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

**Monitoring Requirements**

Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1.[45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF #6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 &42]

5.1.11. The following cartridge filter or baghouse pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the cartridge filter or baghouse to attain the required minimum particulate removal efficiency. Cartridge filter or baghouse pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within ±0.1 inch water gauge. An excursion shall be defined as when the Cartridge filter or baghouse pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the cartridge filter or baghouse and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0”

According to the CAM plan submitted, the differential pressure gauges for the cartridge filter or baghouse shall be operated continuously during operation of the emission units.

[40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stack # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.2.1. Visible Emissions evaluations will be conducted as specified in Facility-wide requirements 3.2.1.

[45CSR§30-5.1c]

5.2.5. Once a quarter (every three months), the permittee shall conduct 30 minute visible emission inspections using U.S. EPA Method 22 (Appendix A-7 of Part 60) of Stack #6. The Method 22 observations shall be conducted while the dust collector 1C (dust collector for Stack #6) is operating. Such monitoring is deemed satisfactory if no visible emissions are detected during the Method 22 observations. If any visible emissions are detected, then the permittee must initiate corrective actions within twenty-four hours of the observation to bring the dust collector to normal operation. The date and time of every Method 22 observation inspection shall be recorded in accordance with Condition 3.4.2. and in the logbook in accordance with 40 C.F.R. §60.676(b). These records shall include any corrective actions taken. The permittee may elect to establish a different satisfactory (success) level for the visible emissions observations inspections by conducting PM performance test according to 40 C.F.R. §60.675(b) simultaneously with a Method 22 observation to determine what constitutes normal visible emission from Stack #6 when it is in compliance with the PM limit of Condition 5.1.7.1.c. These revised visible emissions satisfactory (success) level must be incorporated into the Facility’s Title V Operating Permit.

[45CSR13, R13-2145, 4.2.1.; 40 C.F.R. §60.674(c); 45CSR16]

7.2.1. The permittee shall maintain monthly and annual records on the processing rate of sand to the mobile conveyor and bucket elevator. The monthly and annual sand processing records may be maintained using the U.S. Silica Company computerized Production Tracking Data System (PTDS). Such records shall be maintained in accordance with Condition 3.4.2 of this permit.

[45CSR13, R13-2145, 5.2.1.]

7.2.2. The permittee shall maintain records on the specific location of the Mobile Conveyor (MOB-CONV). Upon initial startup, these records shall include the date moved and a plot plan marking the location for each move. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.

## **Testing Requirements**

5.3.1. The owner or operator shall determine compliance with the particulate matter standards in Section 5.1.1(a) according to Test method and Procedures in 40 C.F.R. §60.675.

**[40 C.F.R. §60.675; 45CSR16]**

5.3.2. For demonstrating initial compliance with the visible emission standards of 5.1.7.1.b. and 5.1.7.1.d., the permittee shall conduct performance testing to determine the visible emissions from the point and fugitive emission sources associated with Q-Rok loading at the facility, which includes Stack #6, Bucket Elevators (BE01 & BE02) and the associated load out spout. Such testing shall be conducted in accordance with Method 9 of Appendix A-4 of 40CFR 60, and the procedures in 40 C.F.R. §60.11. and Condition 3.3.1 of this permit and the following additions:

- a. The minimum distance between the observer and the emission source shall be 15 feet. The observer shall, when possible, select a position that minimizes interference from other fugitive sources (e.g. road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of 40 CFR 60, Section 2.1.) must be followed.
- b. The duration of the Method 9 observations for demonstrating compliance with the fugitive emission limit must be 30 minutes (five 6-minute averages). Compliance with the limit in 5.1.7.1.d. shall be based on the average of five 6-minute averages.
- c. If a building/structure encloses the Bucket Elevators BE01 and BE02 and/or load out spout with the DSH system, the permittee shall conduct initial Method 9 observation of the building/structure to determine the compliance with fugitive emission limit of Condition 5.1.7.1.d. according to 40 C.F.R. 60 Subpart OOO and 40 C.F.R. §60.11. Such source must be operating while conducting the observations.

**[40 C.F.R. §§60.675(c) and (d); 45CSR16; 45CSR13, R13-2145, 4.3.1.]**

The permittee may use the following as alternatives to the reference methods and procedures listed in the above:

- a. If visible emissions from two or more facilities (affected sources) continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:
  - i. Use for the combined emission stream the highest fugitive opacity standard application to any of the individual affected contributing to the emission stream.
  - ii. Separate the emissions so that the opacity of emissions from each affected can be read.
- b. A single visible emission observer may conduct visible emissions observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:
  - i. No more than three emission points may be read concurrently.
  - ii. All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.
  - iii. If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

c. The permittee may reduce the 30-day advance notification of performance test in 40 C.F.R. §§60.7(a)(6), 60.8(d) and 15-day notification of Condition 3.3.1.c. to a 7-day advance notification.

**[40 C.F.R. §§60.675(e) and (g); 45CSR16; 45CSR13, R13-2145, 4.3.1.]**

5.3.3. For demonstrating initial compliance with the PM emission limit of 5.1.7.1.c., the permittee shall conduct performance testing to determine the PM concentration rate from Stack #6. Such testing shall be conducted using Method 5 (Appendix A-3 of Part 60), Method 17 ((Appendix A-6) of Part 60), or Method 5I (Appendix A-3 of Part 60). If the exhaust velocity of Stack #6 is too low to measure accurately using the type S pilot tube as specified in EPA Method 2 (Appendix A-1 of Part 60), then the permittee may use the procedure outline in 40 C.F.R. §60.675(e)(4).

**[45CSR13, R13-2145, 4.3.2.]**

5.3.4. The initial performance testing as required in this section (condition 5.3.2. through 5.3.4.) shall be conducted within 60 days after achieving the maximum production rate of 150 tons per hour through the load out with the DSH system, but no later than 180 days after initial start-up of the load out with the DSH system.

**[40 C.F.R. §§60.672(a) and (b); 45CSR16; 45CSR13, R13-2145, 4.3.3.]**

5.3.5. The permittee shall repeat the performance testing as prescribed in Condition 5.3.2. for compliance with the fugitive emission standard of Condition 5.1.7.1.d. within 5 years from the previous performance test demonstrating compliance.

[40 C.F.R. §60.672(b) and Table 3 of 40 C.F.R. 60 Subpart OOO; 45CSR16; 45CSR13, R13-2145, 4.3.4.]

7.3.1. For demonstrating initial compliance with the visible emission limit of 7.1.1, the permittee shall demonstrate compliance by conducting:

a. An initial performance test according to 40 CFR §60.11 and 40 CFR §60.675; and

b. A repeat performance test according to 40 CFR §60.11 and 40 CFR §60.675 within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays.

[45CSR16, Table 3 to Subpart OOO of 40 CFR 60; 45CSR13, R13-2145, 5.3.1.]

7.3.2. Method 9 of Appendix A-4 of 40 CFR 60 and the procedures in 40 CFR §60.11 will be used to determine opacity, with the following additions:

a. The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet);

b. The observer shall, when possible, select a position that minimizes interference from other fugitive emissions sources (e.g., road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of 40 CFR 60, Section 2.1) must be followed.

[45CSR16, 40 CFR §§60.675(b)(2) and (c)(1); 45CSR13, R13-2145, 5.3.2.]

7.3.3. When determining compliance with the fugitive emissions standard for any affected facility described under 40 CFR §§60.672(b) or 60.672(e)(1), the duration of the Method 9 (40 CFR 60, Appendix A-4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in 7.1.1. must be based on the average of the five 6-minute averages.

[45CSR16, 40 CFR §60.675(c)(3); 45CSR13, R13-2145, 5.3.3.]

The owner or operator shall determine compliance with the particulate matter standards in R30-06500001-2014 (MM01 & MM02) Section 5.1.1(a) according to Test method and Procedures in 40 C.F.R. §60.675. [40 C.F.R. §60.675; 45CSR16]

#### **Recordkeeping Requirements**

5.4.5. The permittee shall maintain monthly and annual records on the processing rate of sand to the five (5) Rotex Screens. The monthly and annual sand processing records may be maintained using the U.S. Silica Company computerized Production Tracking Data System (PTDS). Such records shall be maintained in accordance with Condition 3.4.2. of this permit.

[45CSR13, R13-2145, 4.2.2.] (Rotex Screens 1S – 5S)

5.4.6 **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0 of the current version of R13-2145, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

[45CSR13, R13-2145, 4.4.2.] (CF #36, CF #6)

5.4.7. For the purpose of determining compliance with the emission limits as set forth in Sections 5.1.6.1 and 5.1.6.2, the permittee shall maintain all records that are required herein. Said records shall be maintained on site for a period of five (5) years and shall be made available to the Director or his/her duly authorized representative upon request.

[45CSR13, R13-2015, B.1] [Stack # 25]

5.4.8. For the purpose of determining compliance with the process weight rate limitations set forth in Section 5.1.6.3 the permittee shall maintain monthly and annual records on the processing rate of sand to the Trash Vibrating Screen. Compliance with the monthly and annual process weight rate limits shall be determined using a rolling yearly total. A rolling yearly total shall mean the sum of the process weight rate at any given time for the previous twelve (12) consecutive months. Said records shall be maintained on site for a period of five (5) years. Certified copies of said records shall be made available to the Director or his/her duly authorized representative upon request. The monthly and annual sand processing records may be maintained using the U.S.Silica Company computerized Production Tracking Data System (PTDS)

[45CSR13, R13-2015, B.2] [SCREN16]

5.4.9. For the purpose of determining compliance with the conditions set forth in Section 5.1.6.4, the permittee shall maintain certified annual records that contain at a minimum the following:

Hours of Operation when the Trash Vibrating Screen is operating without the required control device (Cartridge Filter).

Said records shall be maintained on site for a period of five (5) years. Certified copies of these records shall be made available to the Director or his/her duly authorized representative upon request.

**[45CSR13, R13-2015, B.3] [CF#25]**

5.4.10. For the purpose of determining compliance with the conditions set forth in Section 5.1.6.5, the permittee shall meet the following requirements for the control device CF#25:

- a. Maintenance records shall be maintained on site for a period of five (5) years. Certified copies of said records shall be made available to the Director or his/her duly authorized representative upon request.
- b. Malfunctions shall be documented in writing and records of these malfunctions maintained at the facility for a period of five (5) years. Certified copies of said records shall be made available to the Director or his/her duly authorized representative upon request. At minimum, the following information shall be documented for each malfunction:
  1. The cause of malfunction
  2. Steps taken to:
    - correct the malfunction
    - minimize emissions during malfunction
  3. The duration of the malfunction in hours.
  4. The estimated increase in emissions during the malfunction.
  5. Any changes/modifications made to equipment and/or procedures that will help prevent future recurrence of the malfunction.

**[45CSR13, R13-2015, B.4] [CF#25]**

5.4.11. The permittee shall keep records of monitoring requirements of Section 5.2 as specified in Sections 3.4.1, 3.4.2.

**[45CSR§30-5.1c]**

5.4.12. The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis.

**[40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]**

5.4.13. Qualified personnel shall perform visual inspections of the fabric filters control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters. The results of inspection and performance of routine maintenance shall be recorded.

**[40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]**

5.4.14. *General recordkeeping requirements.* (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

**[40 C.F.R. §64.9(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]**

5.4.15. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0 of the current version of R13-2145, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur.

For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

**[40 C.F.R. §60.676(b)(1); 45CSR16; 45CSR13, R13-2145, 4.4.3.] (CF #36, CF #6)**

7.4.1. The permittee shall maintain a record of each periodic inspection required under 40 CFR §60.674(b), including dates and any corrective actions taken, in a logbook (in written or electronic format). Keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Director upon request.



**[45CSR16, 40 CFR §60.676(b)(1), 45CSR13, R13-2145, 5.4.1.]**

7.4.2. The permittee shall maintain a record of each visible emissions observation, including any data required by 40 C.F.R. 60 Appendix A, Method 22 or 45CSR7A, whichever is appropriate. The record will include, at a minimum, the date, time, name of the emission unit, the applicable visible emissions requirement, the results of the observation, and the name of the observer. Records will be maintained on site for a period of no less than five (5) years stating any maintenance or corrective actions taken as a result of the weekly inspections, and the times the fugitive dust control system(s) are inoperable and any corrective actions taken.

**[45CSR7A, 45CSR13, R13-2145, 5.4.2.]**

7.4.3. Record of Monitoring. The permittee shall keep records of monitoring information that include the following:

- a. The date, place as defined in this permit, and time of sampling or measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of the analyses; and
- f. The operating conditions existing at the time of sampling or measurement.

**[45CSR13, R13-2145, 5.4.3.]**

Recordkeeping will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.4.1., 3.4.2., 3.4.3 and 3.4.4. [45CSR§30-5.1c]

The monitoring required in R30-06500001-2014 (MM01 & MM02) sections 6.2.2 will be recorded. [45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter and the wet scrubber during operation on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

Qualified personnel shall perform visual inspections of the fabric filters and wet scrubber control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters and wet scrubber. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

General recordkeeping requirements. (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements. [40 C.F.R. §64.9(b); 45CSR§30-5.1.c.]

**Reporting Requirements**

5.5.1. Reserved.

5.5.2. (a) *General reporting requirements.* (1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

(2) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

- (i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
- (ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(iii) A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.5.3. The Director shall be notified of the initial start-up of Bucket Elevators BE01 & BE02 and the load out spout with the DSH system within 15 days after such date. The notification of these sources can be included in a single notification and needs to include a description of each affected source, equipment manufacturer, and serial number of the equipment if available. This notification supersedes the notification requirements of Condition 2.18. of the current version of R13-2145.

[45CSR13, R13-2145, 4.5.1.; 40 C.F.R. §§60.676(i)(1) and (k); 45CSR16]

5.5.4. The permittee shall report the results of any test conducted as required in conditions 5.3.2., 5.3.3., 5.3.4., and 5.3.5. of this permit to the Director within 60 days after completing such testing.

[45CSR13, R13-2145, 4.5.2.; 40 C.F.R. §§60.676(f) and (k); 45CSR16]

7.5.1. The Director shall be notified of the initial start-up of Mobile conveyor (MOB-CONV) and Bucket Elevator (BE-03) within 15 days after such date. The notification of these sources can be included in a single notification and needs to include a description of each affected source, equipment manufacturer, and serial number of the equipment if available.

[45CSR16, 40 CFR §60.676(i), 45CSR13, R13-2145, 5.5.1.]

7.5.2. The permittee shall report the results of any test conducted as required in Section 7.3. of this permit to the Director within 60 days after completing such testing.

[45CSR16, 40 CFR §60.676(f), 45CSR13, R13-2145, 5.5.2.]

Reporting will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.5.6 and 3.5.8. [45CSR§30-5.1c]

General reporting requirements.

(3) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(iv) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(v) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> Pulverizer Tank #19, SCREW3, SCREW5, SCREW4, #1 Mill Feed Bin, #2 Mill Feed Bin, #3 Mill Feed Bin, #4 Mill Feed Bin, FEEDB1, FEEDB2, FEEDB3, FEEDB4, MILL2, MILL3, MILL4, MILL5, SCREW6, AIRSD7, SCREW7, AIRSD8, ELEV6, ELEV7, ELEV8, ELEV9, AIRSE1, AIRSE2, AIRSE3, AIRSE4, AIRSD9, SCREW16, SCREW17, ELEV14, Pulverizer Tank #20, #5 Mill Feed Bin, FEEDB5, MILL6, AIRSD2, ELEV10, AIRSE5, SCREW18, #6 Mill Feed Bin, FEEDB6, MILL7, AIRSD3, ELEV11, AIRSE6, SCREW19, BF1, ELEV 22, ELEV24, Screen21, AIRSD1, Airslide 100, AIRSD1-GENERIC, ELEV15, BIN2	<b>Emission unit name:</b> Milling Process	<b>List any control devices associated with this emission unit:</b> 1C, 2C, CF #15, CF #46, CF #47, CF #45, CF #27, CF #10, CF #11, CF #39, CF #12, CF #41	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Milling Process and associated fugitive emissions.			
<b>Manufacturer:</b> NA	<b>Model number:</b> NA	<b>Serial number:</b> NA	
<b>Construction date:</b> 1981	<b>Installation date:</b> 1981	<b>Modification date(s):</b> NA	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 100			
<b>Maximum Hourly Throughput:</b> 100	<b>Maximum Annual Throughput:</b> 876,000 TPY	<b>Maximum Operating Schedule:</b> 8760 Hours/Year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? No</b>		<b>If yes, is it?</b>	
<b>Maximum design heat input and/or maximum horsepower rating:</b>		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value


<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--
Particulate Matter (PM <sub>2.5</sub> )	--	0.614
Particulate Matter (PM <sub>10</sub> )	--	4.057
Total Particulate Matter (TSP)	--	10.735
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	--
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
Other Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p><b>Notes:</b>  Allowable PM Stack Emissions (Type 'a' Source Operation)  [45CSR§7-4.1] [Stacks 1, 7, 10, 11, 12, 13, 20, 27, 39, 40, Wsc#2  Total emissions are for all units associated with Milling Process.</p>		
<b><i>Applicable Requirements</i></b>		

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

### **Applicable Requirements**

6.1.2. The following Non-NSPS Fabric Filter pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the filters to attain the required minimum particulate removal efficiency. Filter pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within 0.1 inch water gauge. An excursion shall be defined as when the filter pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the filter and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0”

According to the CAM plan submitted, the differential pressure gauges for the filters shall be operated continuously during operation of the emission units. [40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stacks #1, 7, 10, 11, 12, 13, 20, 27, 39, 40]

The maximum quantity of material to be processed by the Microsizer #3 and Handling Equipment shall be limited to the following:

Airslide 100 (Stack #41): 8 TPH

[45CSR13, R13-2595 (Condition A.1) and PD10-027] [Stack # 42 & 41]

Maximum particulate matter emissions to the atmosphere shall not exceed the following:

Airslide 100: 0.15 PPH and 0.66 TPY

[45CSR13, R13-2595 (Condition A.2) and PD10-027] [Stack # 42 & 41]

The following fugitive dust control measures as specified in Permit Application R13-2595 shall be installed, maintained, and operated at all times when the facility is in operation in order to minimize fugitive particulate matter emissions:

Airslide 100,: Torit DFT2-4-155 Baghouse (2C) at 99.9%

[45CSR13, R13-2595 (Condition A.3) and PD10-027] [Baghouses 2C & CF#42; Stack # 42 & 41]

5.1.10.4. The stabilized static pressure loss across baghouse 2C and CF#42 shall remain between 0.5 to 6.0 inches of water. [45CSR13, R13-2595 (Condition A.4) and PD10-027] [Baghouse 2C & CF#42; Stack # 42 & 41]

5.1.10.5. Except during startup and shutdown, opacity from baghouse 2C and Stack #42 shall not exceed 10 percent based on a six minute block average. In order to determine compliance with this limit the permittee shall conduct monthly visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for stacks #41 and #42. These observations shall be conducted during periods of facility operation for a sufficient time interval to determine if the unit has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22. If sources of visible emissions are identified during the survey, the permittee shall conduct an opacity evaluation in accordance with 40CFR60 Appendix A, Method 9, within 24 hours. A 40CFR60 Appendix A, Method 9 evaluation shall not be required if the visible emission condition is corrected within 24 hours and the units are operated at normal operating conditions with no visible emissions being observed. Records shall be maintained on site reporting the results of each test. Upon observing any visible emissions in excess of twenty percent (20%) opacity, or excess of forty (40%) for any period or periods aggregating more than five (5) minutes in any sixty (60) minute period, the Company shall submit a written report, certified by a responsible official, to the Director of the Division of Air Quality within five (5) days after taking said reading.

[45CSR13, R13-2595 (Condition A.5) and PD10-027] [Stack # 42 & 41]

According to the CAM plan submitted, the differential pressure gauges for the cartridge filter or baghouse shall be operated continuously during operation of the emission units.

[40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stack # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

X Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

### **Monitoring Requirements**

5.2.1. Visible Emissions evaluations will be conducted as specified in Facility-wide requirements 3.2.1. [45CSR§30-5.1c]

5.1.11. The following cartridge filter or baghouse pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the cartridge filter or baghouse to attain the required minimum particulate removal efficiency. Cartridge filter or baghouse pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within 0.1 inch water gauge. An excursion shall be defined as when the Cartridge filter or baghouse pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the cartridge filter or baghouse and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0”

According to the CAM plan submitted, the differential pressure gauges for the cartridge filter or baghouse shall be operated continuously during operation of the emission units.

[40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stack # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1. [45CSR§30-5.1c]

### **Testing Requirements**

5.3.1. The owner or operator shall determine compliance with the particulate matter standards in Section 5.1.1(a) according to Test method and Procedures in 40 C.F.R. §60.675.

[40 C.F.R. §60.675; 45CSR16]

NA [R30-06500001-2014 (MM01 & MM02) sections 6.3.]

### **Recordkeeping Requirements**

Recordkeeping will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.4.1., 3.4.2., 3.4.3 and 3.4.4. [45CSR§30-5.1c]

The monitoring required in R30-06500001-2014 (MM01 & MM02) sections 6.2.2 will be recorded. [45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter and the wet scrubber during operation on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

Qualified personnel shall perform visual inspections of the fabric filters and wet scrubber control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters and wet scrubber. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

General recordkeeping requirements. (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements. [40 C.F.R. §64.9(b); 45CSR§30-5.1.c.]

5.4.11. The permittee shall keep records of monitoring requirements of Section 5.2 as specified in Sections 3.4.1, 3.4.2. [45CSR§30-5.1c]

5.4.12. The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis.

[40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.13. Qualified personnel shall perform visual inspections of the fabric filters control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters. The results of inspection and performance of routine maintenance shall be recorded.

[40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.14. *General recordkeeping requirements.* (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

[40 C.F.R. §64.9(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

### Reporting Requirements

5.5.1. Reserved.

5.5.2. (a) *General reporting requirements.* (1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

(2) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(iii) A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

Reporting will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.5.6 and 3.5.8. [45CSR§30-5.1c]

General reporting requirements.

(5) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(vii) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(viii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R.

§64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.



<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> Microsizer #3, AIRSI12, AIRSI13, Tailing Bins, PNEU2, PNEU4, BIN7, #1 & #2 Pumps, PNEU1, ELEV16, 5 Micron Feed Bin, AIRSE8 - 16, 18 &19, ELEV17, BIN5, BIN4, PACKR7, ELEV23, PACKR4, PACKR3, PACKR5 (1e & 2e)		<b>Emission unit name:</b> Micron Production	
<b>List any control devices associated with this emission unit:</b> CF #11, CF #12, CF #13, CF #20, CF #34, CF #37, CF #38, CF #42			
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Classification (10/15/30/40 Micron), 5 Micron Classification, and associated fugitive emissions.			
<b>Manufacturer:</b> NA		<b>Model number:</b> NA	
<b>Serial number:</b> NA		<b>Construction date:</b> 1998	
<b>Installation date:</b> 1998		<b>Modification date(s):</b> NA	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 150 TPH			
<b>Maximum Hourly Throughput:</b> 150		<b>Maximum Annual Throughput:</b> 1,314,000 TPY	
<b>Maximum Operating Schedule:</b> 8760 Hours/Year			
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? No</b>			<b>If yes, is it?</b>
<b>Maximum design heat input and/or maximum horsepower rating:</b>			<b>Type and Btu/hr rating of burners:</b>
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
<b>Fuel Type</b>	<b>Max. Sulfur Content</b>	<b>Max. Ash Content</b>	<b>BTU Value</b>

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--
Particulate Matter (PM <sub>2.5</sub> )	--	0.446
Particulate Matter (PM <sub>10</sub> )	--	1.072
Total Particulate Matter (TSP)	--	3.074
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	--
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
Other Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p><b>Notes:</b></p> <p>Total emissions are for all units associated with Micron Production.  Allowable PM Stack Emissions (Type 'a' Source Operation)  [45CSR§7-4.1] [Stacks 1, 7, 10, 11, 12, 13, 20, 27, 39, 40, Wsc#2</p>		
<b>Applicable Requirements</b>		
<p><b>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit with the condition number</u>. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.</b></p> <p><b>Applicable Requirements</b></p> <p>6.1.2. The following Non-NSPS Fabric Filter pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the filters to attain the required minimum particulate removal efficiency. Filter pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within ±0.1 inch water gauge. An excursion shall be defined as when the filter pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the filter and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0”</p>		

According to the CAM plan submitted, the differential pressure gauges for the filters shall be operated continuously during operation of the emission units. [40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stacks #1, 7, 10, 11, 12, 13, 20, 27, 39, 40]

5.1.3.1. The maximum process weight rate for the permitted facilities (Ground Sand Packaging/Loading) shall not exceed 10 tons per hour.

[45CSR13, R13-991] [Ground Sand Packaging/Loading]

5.1.3.2. The particulate emission rate for Emission point 1e {Bulk Bagger (PACKR5), Stack # 34} as defined in Permit application No. 991, shall not exceed 0.1 pounds per hour.

[45CSR13, R13-991] [Stack # 34, Emission Point 1e]

5.1.3.3. The particulate emission rate for Emission point 2e (Room Venting, Stack # 34), as defined in Permit application No. 991, shall not exceed 0.5 pounds per hour.

[45CSR13, R13-991] [Stack # 34, Emission Point 2e]

Note : In original construction, emission points 1e and 2e were controlled by separate baghouses. Baghouses were replaced by one cartridge filter control device. PD ISSUED 5-16-94.

5.1.4.1. Emissions from Mikropul cartridge baghouse Model CFH-6-V-6"B" Emission point ID No. 37 (Stack # 37) and vented through Air Pollution Control Device ID No. 1C, shall not exceed 0.2 pounds of particulate matter per hour (lb./hr.).

[45CSR13, R13-1917, A.1] [Stack # 37]

5.1.4.2 The maximum amount of processed material charged into the feed bin (air pollution source 6S){5 Micron feed Bin}, return bucket elevator (top) (air pollution source 7S)[ELEV 16]and return bucket elevator (bottom) (air pollution source 8S) {ELEV 17}shall not exceed 37.5 tons per hour (TPH). [45CSR13, R13-1917, A.2] [6S, 7S, 8S]

5.1.4.3. Emissions from Mikropul Cartridge baghouse, Model CFH-6-V-12"B", Emission Point ID No. 38 (Stack # 38), and vented through Air Pollution Control Device ID No. 2C, shall not exceed 0.2 pounds of particulate matter per hour (lb/hr).

[45CSR13, R13-1917, A.3] [Stack # 38]

5.1.4.4. The maximum amount of processed material charged into the bulk storage bin (air pollution source 2S), product bin (air pollution source 1S) [Bin 5] , bulk loading spout (air pollution source 3S), the bagger bin (air pollution source 4S) [MIN-U-SIL Bagger bin], and stone container model 988 DM single spout bagger (air pollution source 5S) [PACKR7] shall not exceed 35.5 tons per hour (TPH).

[45CSR13, R13-1917, A.4] [1S to 5S]

The maximum quantity of material to be processed by the Microsizer #3 and Handling Equipment shall be limited to the following:

Airslide 100 (Stack #41): 8 TPH

[45CSR13, R13-2595 (Condition A.1) and PD10-027] [Stack # 42 & 41]

Maximum particulate matter emissions to the atmosphere shall not exceed the following:

Airslide 100: 0.15 PPH and 0.66 TPY

[45CSR13, R13-2595 (Condition A.2) and PD10-027] [Stack # 42 & 41]

The following fugitive dust control measures as specified in Permit Application R13-2595 shall be installed, maintained, and operated at all times when the facility is in operation in order to minimize fugitive particulate matter emissions:

Airslide 100,: Torit DFT2-4-155 Baghouse (2C) at 99.9%

[45CSR13, R13-2595 (Condition A.3) and PD10-027] [Baghouses 2C & CF#42; Stack # 42 & 41]

5.1.10.4. The stabilized static pressure loss across baghouse 2C and CF#42 shall remain between 0.5 to 6.0 inches of water. [45CSR13, R13-2595 (Condition A.4) and PD10-027] [Baghouse 2C & CF#42; Stack # 42 & 41]

5.1.10.5. Except during startup and shutdown, opacity from baghouse 2C and Stack #42 shall not exceed 10 percent based on a six minute block average. In order to determine compliance with this limit the permittee shall conduct monthly visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for stacks #41and #42. These observations shall be conducted during periods of facility operation for a sufficient time interval to determine if the unit has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22. If sources of visible

emissions are identified during the survey, the permittee shall conduct an opacity evaluation in accordance with 40CFR60 Appendix A, Method 9, within 24 hours. A 40CFR60 Appendix A, Method 9 evaluation shall not be required if the visible emission condition is corrected within 24 hours and the units are operated at normal operating conditions with no visible emissions being observed. Records shall be maintained on site reporting the results of each test. Upon observing any visible emissions in excess of twenty percent (20%) opacity, or excess of forty (40%) for any period or periods aggregating more than five (5) minutes in any sixty (60) minute period, the Company shall submit a written report, certified by a responsible official, to the Director of the Division of Air Quality within five (5) days after taking said reading.

[45CSR13, R13-2595 (Condition A.5) and PD10-027] [Stack # 42 & 41]

Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

#### **Monitoring Requirements**

Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1. [45CSR§30-5.1c]

5.2.1. Visible Emissions evaluations will be conducted as specified in Facility-wide requirements 3.2.1. [45CSR§30-5.1c]

5.2.2. The permittee shall monitor and maintain records of daily observations of pressure drop across baghouses 2C and CF#42.

[45CSR13, R13-2595, B.9 and PD10-027] [Baghouses 2C & CF#42; Stack # 28, 29 & 41]

5.2.4. Maintenance records for the air pollution control devices listed in 5.1.10.3. shall be maintained on site for a period of five (5) years. Malfunctions shall be documented in writing and records of these malfunctions maintained at the facility for a period of five (5) years. Certified copies of said records shall be made available to the Director or his/her duly authorized representative upon request. At a minimum, the following information shall be documented for each malfunction:

- a. The equipment involved in the malfunction and the associated cause.
- b. Steps taken to correct the malfunction.
- c. The steps taken to minimize the emissions during the malfunction.
- d. The duration of the malfunction.
- e. The increase in emissions during the malfunction.
- f. Steps taken to prevent a similar malfunction in the future.

[45CSR13, R13-2595, B.8 and PD10-027] [Baghouses 2C & CF#42; Stack # 42 & 41]

5.1.11. The following cartridge filter or baghouse pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the cartridge filter or baghouse to attain the required minimum particulate removal efficiency. Cartridge filter or baghouse pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within 0.1 inch water gauge. An excursion shall be defined as when the Cartridge filter or baghouse pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the cartridge filter or baghouse and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0"

According to the CAM plan submitted, the differential pressure gauges for the cartridge filter or baghouse shall be operated continuously during operation of the emission units.

[40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stack # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

#### **Testing Requirements**

5.3.1. The owner or operator shall determine compliance with the particulate matter standards in Section 5.1.1(a) according to Test method and Procedures in 40 C.F.R. §60.675.

[40 C.F.R. §60.675; 45CSR16]

NA [R30-06500001-2014 (MM01 & MM02) sections 6.3.]

#### **Recordkeeping Requirements**

5.4.11. The permittee shall keep records of monitoring requirements of Section 5.2 as specified in Sections 3.4.1, 3.4.2. [45CSR§30-5.1c]

5.4.12. The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.13. Qualified personnel shall perform visual inspections of the fabric filters control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.14. *General recordkeeping requirements.* (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 C.F.R. §64.9(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

Recordkeeping will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.4.1., 3.4.2., 3.4.3 and 3.4.4. [45CSR§30-5.1c]

The monitoring required in R30-06500001-2014 (MM01 & MM02) sections 6.2.2 will be recorded. [45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter and the wet scrubber during operation on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

Qualified personnel shall perform visual inspections of the fabric filters and wet scrubber control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters and wet scrubber. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

*General recordkeeping requirements.* (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements. [40 C.F.R. §64.9(b); 45CSR§30-5.1.c.]

## **Reporting Requirements**

5.5.1. Reserved.

5.5.2. (a) *General reporting requirements.* (1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

(2) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(iii) A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

Reporting will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.5.6 and 3.5.8. [45CSR§30-5.1c]

General reporting requirements.

(7) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(x) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(xi) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> BIN4 SPOUT, Tank #7 & Tank #8, Tank #15 & Tank #16, Tanks #13 & #17, Tanks #9 - #12, Tanks #14 & #18, Steel Tank #21, CGS Tank, PEMCOTank, Supersil Storage Silos #1 - #4 (1e-4e), MIN-U-SIL storage silo #5 (5e), MIN-U-SIL storage silos #6 & #7 (6e & E1), MIN-U-SIL storage silo #8 (6e & E1), ISTANK18, Steel Storage Tank, SPOUT1, SPOUT2, SPOUT3, SPOUT4, SPOUT5, SPOUT6, QROK SPOUTS, #1 Stone Tank, #2 Stone Tank		<b>Emission unit name:</b> Storage Structures	
		<b>List any control devices associated with this emission unit:</b> CF #7, CF #9, CF #13, CF #27, CF #28, CF #29, CF #33, CF #34, CF #38	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Storage Structures and associated fugitive emissions			
<b>Manufacturer:</b> NA		<b>Model number:</b> NA	
		<b>Serial number:</b> NA	
<b>Construction date:</b> 1981		<b>Installation date:</b> 1981	
		<b>Modification date(s):</b> NA	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> Varies			
<b>Maximum Hourly Throughput:</b> Varies		<b>Maximum Annual Throughput:</b> Varies	
		<b>Maximum Operating Schedule:</b> 8760 Hours/Year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? No</b>			<b>If yes, is it?</b>
<b>Maximum design heat input and/or maximum horsepower rating:</b>			<b>Type and Btu/hr rating of burners:</b>
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
<b>Fuel Type</b>	<b>Max. Sulfur Content</b>	<b>Max. Ash Content</b>	<b>BTU Value</b>

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--
Particulate Matter (PM <sub>2.5</sub> )	--	3.608
Particulate Matter (PM <sub>10</sub> )	--	5.069
Total Particulate Matter (TSP)	--	6.260
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	--
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
Other Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p><b>Notes:</b></p> <p>Total emissions are for all units associated with Storage Structures.  Allowable PM Stack Emissions (Type 'a' Source Operation)  [45CSR§7-4.1] [Stacks 1, 7, 10, 11, 12, 13, 20, 27, 39, 40, Wsc#2]</p>		
<p><b>Applicable Requirements</b></p> <p><b>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.</b></p> <p><b>Applicable Requirements</b></p> <p>5.1.2. The following emission limits shall not be exceeded: Storage Silo #6: 0.05 PPH, Storage Silo #5: 0.05 PPH, Stack #33: 0.2 PPH  [45CSR13, R13-750] [Stacks 28, 29 &amp;33]</p> <p>5.1.3.1. The maximum process weight rate for the permitted facilities (Ground Sand Packaging/Loading) shall not exceed 10 tons per hour.  [45CSR13, R13-991] [Ground Sand Packaging/Loading]</p>		



5.1.3.2. The particulate emission rate for Emission point 1e {Bulk Bagger (PACKR5), Stack # 34} as defined in Permit application No. 991, shall not exceed 0.1 pounds per hour.

[45CSR13, R13-991] [Stack # 34, Emission Point 1e]

5.1.3.3. The particulate emission rate for Emission point 2e (Room Venting, Stack # 34), as defined in Permit application No. 991, shall not exceed 0.5 pounds per hour.

[45CSR13, R13-991] [Stack # 34, Emission Point 2e]

Note : In original construction, emission points 1e and 2e were controlled by separate baghouses. Baghouses were replaced by one cartridge filter control device. PD ISSUED 5-16-94.

5.1.4.3. Emissions from Mikropul Cartridge baghouse, Model CFH-6-V-12"B", Emission Point ID No. 38 (Stack # 38), and vented through Air Pollution Control Device ID No. 2C, shall not exceed 0.2 pounds of particulate matter per hour (lb/hr).

[45CSR13, R13-1917, A.3] [Stack # 38]

5.1.4.4. The maximum amount of processed material charged into the bulk storage bin (air pollution source 2S), product bin (air pollution source 1S) [Bin 5] , bulk loading spout (air pollution source 3S), the bagger bin (air pollution source 4S) [MIN-U-SIL Bagger bin], and stone container model 988 DM single spout bagger (air pollution source 5S) [PACKR7] shall not exceed 35.5 tons per hour (TPH).

[45CSR13, R13-1917, A.4] [1S to 5S]

5.1.5. Particulate matter (PM) emissions shall not exceed the following hourly and annual emission limits: Stack #28: 0.70 PPH and 0.07 TPY

[45CSR13, R13-1970, A.1] [Stack # 28]

5.1.9.1. The maximum hourly and annual processing rates of sand through the bulk sand bagger shall not exceed 30 TPH and 262,800 TPY, based on 8,760 hours of operation per year.

[45CSR13, R13-2299, A.1] [PACKR8]

5.1.9.2. The permittee shall operate the air pollution control device, the Torit Model Number 4DF32-155 Pulse Type Cartridge Dust Collector (Equipment ID No. 1C; Emission Point ID No. 1E - Stack #9), as outlined in Permit Application R13-2299.

[45CSR13, R13-2299, A.2] [Stack # 9]

5.1.9.3. In accordance with the requirements of 40 CFR 60, Subpart OOO, the maximum particulate (PM) emissions from the air pollution control device, the Torit Model Number 4DF32-155 Pulse Type Cartridge Dust Collector (Emission Point ID No. 1E - Stack #9), shall not exceed 0.022 grains per dry standard cubic foot (0.05 grams/dry standard meter).

[45CSR13, R13-2299, A.3; 40 C.F.R. § 60.672; 45CSR16] [Stack # 9]

6.1.2. The following Non-NSPS Fabric Filter pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the filters to attain the required minimum particulate removal efficiency. Filter pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within 0.1 inch water gauge. An excursion shall be defined as when the filter pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the filter and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0"

According to the CAM plan submitted, the differential pressure gauges for the filters shall be operated continuously during operation of the emission units. [40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stacks #1, 7, 10, 11, 12, 13, 20, 27, 39, 40]

X Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

### **Monitoring Requirements**

Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1. [45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 9, 25, 28, 29, 33, 34, 36, 37, 38 & 41]

Qualified personnel shall perform visual inspections of the fabric filters control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 9, 25, 28, 29, 33, 34, 36, 37, 38 & 41]

5.2.1. Visible Emissions evaluations will be conducted as specified in Facility-wide requirements 3.2.1. [45CSR§30-5.1c]

5.2.2. The permittee shall monitor and maintain records of daily observations of pressure drop across baghouses 2C and CF#42.

[45CSR13, R13-2595, B.9 and PD10-027] [Baghouses 2C & CF#42; Stack # 28, 29 & 41]

5.2.4. Maintenance records for the air pollution control devices listed in 5.1.10.3. shall be maintained on site for a period of five (5) years. Malfunctions shall be documented in writing and records of these malfunctions maintained at the facility for a period of five (5) years. Certified copies of said records shall be made available to the Director or his/her duly authorized representative upon request. At a minimum, the following information shall be documented for each malfunction:

- a. The equipment involved in the malfunction and the associated cause.
- b. Steps taken to correct the malfunction.
- c. The steps taken to minimize the emissions during the malfunction.
- d. The duration of the malfunction.
- e. The increase in emissions during the malfunction.
- f. Steps taken to prevent a similar malfunction in the future.

[45CSR13, R13-2595, B.8 and PD10-027] [Baghouses 2C & CF#42; Stack # 42 & 41]

5.1.11. The following cartridge filter or baghouse pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the cartridge filter or baghouse to attain the required minimum particulate removal efficiency. Cartridge filter or baghouse pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within 0.1 inch water gauge. An excursion shall be defined as when the Cartridge filter or baghouse pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the cartridge filter or baghouse and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0”

According to the CAM plan submitted, the differential pressure gauges for the cartridge filter or baghouse shall be operated continuously during operation of the emission units.

[40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stack # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

### **Testing Requirements**

5.3.1. The owner or operator shall determine compliance with the particulate matter standards in Section 5.1.1(a) according to Test method and Procedures in 40 C.F.R. §60.675.

[40 C.F.R. §60.675; 45CSR16]

NA [R30-06500001-2014 (MM01 & MM02) sections 6.3.]

### **Recordkeeping Requirements**

For the #9 Torit Model No. 4DF32-155 Pulse Type Cartridge Dust Collector (Equipment ID No. 1C-CF#9):

a. Maintenance records shall be maintained on site for a period of five (5) years. Certified copies of these records shall

be made available to the Director or his duly authorized representative upon request.

b. Malfunctions shall be documented in writing and records of these malfunctions maintained at the facility for a period of 5 years. Certified copies of these records shall be made available to the Director or his duly authorized representative upon request. At minimum, the following information shall be documented for each malfunction:

- The cause of malfunction.
- Steps taken to:
  - correct the malfunction.
  - minimize emissions during malfunction.
- The duration of the malfunction in hours.
- The estimated increase in emissions during the malfunction.
- Any changes/modifications made to equipment and/or procedures that will help prevent future recurrence of the malfunction.

[45CSR13, R13-2423, B.5] [CF#9]

5.4.11. The permittee shall keep records of monitoring requirements of Section 5.2 as specified in Sections 3.4.1, 3.4.2. [45CSR§30-5.1c]

5.4.12. The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis.

[40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.13. Qualified personnel shall perform visual inspections of the fabric filters control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters. The results of inspection and performance of routine maintenance shall be recorded.

[40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.14. *General recordkeeping requirements.* (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

[40 C.F.R. §64.9(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

Recordkeeping will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.4.1., 3.4.2., 3.4.3 and 3.4.4. [45CSR§30-5.1c]

The monitoring required in R30-06500001-2014 (MM01 & MM02) sections 6.2.2 will be recorded. [45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter and the wet scrubber during operation on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

Qualified personnel shall perform visual inspections of the fabric filters and wet scrubber control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters and wet scrubber. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

*General recordkeeping requirements.* (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements. [40 C.F.R. §64.9(b); 45CSR§30-5.1.c.]

## Reporting Requirements

5.5.1. Reserved.

5.5.2. (a) *General reporting requirements.* (1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

(2) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(iii) A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8.

Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

**[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]**

Reporting will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.5.6 and 3.5.8. [45CSR§30-5.1c]

General reporting requirements.

(9) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(xiii) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(xiv) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R.

§64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.]

(11) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(xvi) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(xvii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

) A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R.

§64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

**If no, complete the Schedule of Compliance Form as ATTACHMENT F.**

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> STOCK1, CRUSH1, CRUSH2, SCREN1, SCREN2, SCREN3. TRUCK1, FEEDER1, CRUSH1, SCREN1, SCRENBC1, SCRENBC2, SCRENBC3, STACKBC1, STACKBC2, CRUSH2, CRUSHSCR1, SCRENBC4, SCRENBC5, SCRENBC6, SCRENBC7		<b>Emission unit name:</b> Limestone System	
<b>List any control devices associated with this emission unit:</b> CF #7, CF #9, CF #13, CF #27, CF #28, CF #29, CF #33, CF #34, CF #38			
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Limestone System and associated fugitive emissions			
<b>Manufacturer:</b> NA		<b>Model number:</b> NA	
<b>Serial number:</b> NA			
<b>Construction date:</b> 1981		<b>Installation date:</b> 1981	
<b>Modification date(s):</b> NA			
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> ~21 TPH			
<b>Maximum Hourly Throughput:</b> ~21 TPH		<b>Maximum Annual Throughput:</b> 182,500 TPY	
<b>Maximum Operating Schedule:</b> 8760 Hours/Year			
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? No</b>			<b>If yes, is it?</b>
<b>Maximum design heat input and/or maximum horsepower rating:</b>			<b>Type and Btu/hr rating of burners:</b>
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
<b>Fuel Type</b>	<b>Max. Sulfur Content</b>	<b>Max. Ash Content</b>	<b>BTU Value</b>

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--
Particulate Matter (PM <sub>2.5</sub> )	--	0.436
Particulate Matter (PM <sub>10</sub> )	--	9.563
Total Particulate Matter (TSP)	--	28.446
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	--
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
Other Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p><b>Notes:</b></p> <p>Total emissions are for all units associated with Limestone System.</p>		
<b><i>Applicable Requirements</i></b>		
<p><b>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.</b></p> <p><b>Applicable Requirements</b></p> <p>4.1.1. In accordance with the information filed in Permit Application R13-3535, the equipment/processes identified under Section 1.0 Emission Units of this permit shall be installed, maintained, and operated so as to minimize any fugitive escape of pollutants, shall not exceed the listed maximum design capacities and/or throughputs, and shall use the specified control devices.</p> <p>4.1.2. The maximum transfer rate of material through the crushers and screens shall not exceed hourly and annual throughput rates identified under Section 1.0 Emission Units of this permit. Said limits shall be based on a 12-month</p>		

rolling total.

4.1.3. The permitted facility shall comply with all applicable requirements of 45CSR§7 - “To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations,” provided that the facility shall comply with any more stringent requirements as may be set forth under section 4.1. of this permit. The pertinent sections of 45CSR§7 applicable to this facility include, but are not limited to, the following:

4.1.3.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7. [45CSR§7-3.1.]

4.1.3.2. The provisions of subsection 3.1 shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period. [45CSR§7-3.2.]

4.1.3.3. No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A found at the end of this rule. [45CSR§7-4.1.]

4.1.3.4. No person shall cause, suffer, allow, or permit any manufacturing process generating fugitive particulate matter to operate that is not equipped with a system to minimize the emissions of fugitive particulate matter. To minimize means that a particulate capture or suppression system shall be installed to ensure the lowest fugitive particulate emissions reasonably achievable. The permitted facility shall comply with all applicable requirements of 45CSR§7, with the exception of any more stringent limitations set forth in Section 4.1. of this permit. [45CSR§7-5.1.]

4.1.3.5. The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment. [45CSR§7-5.2.]

4.1.4. The facility is subject to 40 CFR 60 Subpart OOO, including but not limited to following:

4.1.4.1. Except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart. [40CFR 60.670(a)(1)]

4.1.4.2. An affected facility under paragraph (a) of this section that commences construction, modification or reconstruction after August 31, 1983, is subject to the requirements of this part. [40CFR 60.670(e)]

4.1.4.3. Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.8. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems. [40CFR 60.672(b)]

4.1.4.4. A crusher shall not discharge fugitive emissions into the atmosphere greater than 12 percent opacity; [40CFR§60.672(b)]

4.1.4.5. Fugitive emission from the transfer points on the belt conveyors shall not discharge fugitive emissions into the atmosphere greater than 7 percent opacity; [40CFR§60.672(b)]

4.1.5. Owners and Operators of Engines classified as Nonroad. Owners and operators of engines classified as nonroad must ensure that the engine does not remain at a location for more than 12 months, with location being any single site at a building, structure, facility or installation. [40CFR§1068.30]

A nonroad engine ceases to be a nonroad engine and becomes a new stationary engine if - (1) At any time, it meets the criteria specified in paragraph (2)(iii) in the definition of “nonroad engine”



in § 1068.30. For example, a portable generator engine ceases to be a nonroad engine if it is used or will be used in a single specific location for 12 months or longer. If we determine that an engine will be or has been used in a single specific location for 12 months or longer, it ceased to be a nonroad engine when it was placed in that location.

[40 CFR § 1068.31(e)(1)]

4.1.6. Operation and Maintenance of Air Pollution Control Equipment. The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR§13-5.10.]

Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

### Monitoring Requirements

4.2.1. For the purpose of determining compliance with the opacity limits of 40 CFR 60 Subpart OOO, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

a. The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course.

b. Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source (stack, transfer point, fugitive emission source, etc.) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions.

c. If visible emissions are present at a source(s) for three (3) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

4.2.2. The permittee shall install instrumentation to measure both volumetric flow rate and water pressure as supplied to the facility's water spray bars on a daily basis. At the beginning and end of each operating day, the water pressure and ambient temperature shall be recorded. At the end of each operating day, the tonnage of rock processed, the amount of water (measured in gallons) utilized that day, the number of hours of operation, and a description of the day's weather conditions shall be recorded. Such records shall be maintained in accordance with Condition 3.4.1. of this permit.

4.2.3. The permittee shall perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The permittee must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under §60.676(b). Such records shall be maintained in accordance with Condition 3.4.1. of this permit. [40CFR§§60.674(b)]

The permittee may combine the records as required in Condition 4.2.2. and records of these monthly inspections into one document or logbook.

### Testing Requirements

4.3.1. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of equipment, the permittee shall conduct performance test(s) to demonstrate compliance with the visible emission standards in Condition 4.1.4. for the sources listed in Section 1.0 of this permit. Such testing conducted in accordance with the following. [40CFR§60.8(a)]

(a) Such testing shall be conducted in accordance with Condition 3.3.1. of this permit.

(b) Such testing shall be conducted while the piece is processing or handling stone equal to or greater than 90 percent its hourly throughput limit as listed in Section 1.0 or at the maximum throughput possible.

(c) Method 9 of Appendix A-4, 40 CFR 60 shall be used with the following additions;

(i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

[40CFR§§60.675(c)(1)(i)]

(ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of 40CFR60, Section 2.1) must be followed. [40CFR§§60.675(c)(1)(ii)]

(iii) At locations where water sprays are employed at, the water mist must not be confused with particulate matter emissions and is not be considered visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible. [40CFR§§60.675(c)(1)(iii)]

(iv) Duration of the Method 9 Observation must be 30 minutes (five 6-minute observations). Compliance with the visible emission standard in Conditions 4.1.1.c. and f. must be based on the average of five 6-minute averages.

[40CFR§§60.675(c)(3)]

(v) If emissions from two or more affected sources continuously interfere so that the opacity from an individual affected facility cannot be read, either of the following procedures may be used:

1. Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream. [40CFR§§60.675(e)(1)(i)]

2. Separate the emissions so that the opacity of emissions from each affected facility can be read.

[40CFR§§60.675(e)(1)(ii)]

(vi) A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:

1. No more than three emission points may be read concurrently. [40CFR§§60.675(e)(2)(i)]

2. All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points. [40CFR§§60.675(e)(2)(ii)]

3. If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

[40CFR§§60.675(e)(2)(iii)]

(d) During such testing, the permittee shall monitor and record the water pressure, flow rate of the water sprays, and the hourly throughput or process rate of the piece of equipment at which the observation is occurring. Such records shall include the water pressure and flow rate at the beginning and the at end of the last observation for the actual operation day. Such records shall be included in with the test results and maintained in accordance with Condition 3.4.1 of this permit.

### **Recordkeeping Requirements**

4.4.1. Record of Monitoring. The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.

4.4.2. Record of Maintenance of Air Pollution Control Equipment. For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

4.4.3. Record of Malfunctions of Air Pollution Control Equipment. For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

4.4.4. For the purpose of determining compliance with maximum throughput and operation limits set forth in 4.1.2., the applicant shall maintain certified daily and monthly records. An example form is included as Appendix C. Compliance will be determined on a 12- month rolling total. These records shall be maintained on-site for a period of five (5) years and be made available to the Director of the Division of Air Quality or his/her duly authorized representative upon request.

4.4.5. The permittee shall maintain records of all monitoring data required by Section 4.2.1 documenting the date and time of each visible emission check, the emission point or equipment / source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6-10 mph NE wind) during the visual emission check(s). An example form is supplied as Appendix A. Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the normal monthly evaluation, the record of observation may note "out of service" (O/S) or equivalent.

### **Reporting Requirements**

4.5.1. Test results shall be submitted to the Director no more than sixty (60) days after the date the testing takes place.

4.5.2. Any exceedances of the allowable visible emission requirement for any emission source discovered during observation using 40CFR Part 60, Appendix A, Method 9 must be reported in writing to the Director as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the exceedances, and any corrective measures taken or planned.

4.5.3. The permittee shall submit written notification of the following items within the specified time frames to the Director:

A notification of the actual date of initial startup of an affected facility dated within 15 days after such date. [40CFR§60.7(3)]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> Roads, Stockpile, Golf Sand Stockpile, Float Sand Stockpile, Quarry		<b>Emission unit name:</b> Miscellaneous	
<b>List any control devices associated with this emission unit:</b>			
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Miscellaneous sources and associated fugitive emissions			
<b>Manufacturer:</b> NA		<b>Model number:</b> NA	
<b>Serial number:</b> NA			
<b>Construction date:</b> 1970		<b>Installation date:</b> 1970	
<b>Modification date(s):</b> NA			
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> Varies			
<b>Maximum Hourly Throughput:</b> Varies		<b>Maximum Annual Throughput:</b> Varies	
<b>Maximum Operating Schedule:</b> 8760 Hours/Year			
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? No</b>			<b>If yes, is it?</b>
<b>Maximum design heat input and/or maximum horsepower rating:</b>			<b>Type and Btu/hr rating of burners:</b>
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
<b>Fuel Type</b>	<b>Max. Sulfur Content</b>	<b>Max. Ash Content</b>	<b>BTU Value</b>

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--
Particulate Matter (PM <sub>2.5</sub> )	--	15.716
Particulate Matter (PM <sub>10</sub> )	--	94.157
Total Particulate Matter (TSP)	--	343.939
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	--
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
Other Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p><b>Notes:</b></p> <p>Total emissions are for all units associated with Miscellaneous Sources.</p>		
<b><i>Applicable Requirements</i></b>		
<p>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (<i>Note: Title V permit condition numbers alone are not the underlying applicable requirements</i>). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.</p> <p><b>Applicable Requirements</b></p>		
<p><input checked="" type="checkbox"/> Permit Shield</p>		

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

**Monitoring Requirements**

**Testing Requirements**

**Recordkeeping Requirements**

**Reporting Requirements**

**Are you in compliance with all applicable requirements for this emission unit? Yes**

**If no, complete the Schedule of Compliance Form as ATTACHMENT F.**

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> Tank No. 1 - Tank No. 8, Tank No. 11 - Tank No. 13, Tank No. 16, Tank No. 17, Tank No. 24 - Tank No. 33		<b>Emission unit name:</b> Miscellaneous	
<b>List any control devices associated with this emission unit:</b>			
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Liquid Storage Tank Emissions.			
<b>Manufacturer:</b> NA		<b>Model number:</b> NA	
<b>Serial number:</b> NA			
<b>Construction date:</b> Varies		<b>Installation date:</b> Varies	
<b>Modification date(s):</b> NA			
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> Varies			
<b>Maximum Hourly Throughput:</b> Varies		<b>Maximum Annual Throughput:</b> Varies	
<b>Maximum Operating Schedule:</b> 8760 Hours/Year			
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? No</b>			<b>If yes, is it?</b>
<b>Maximum design heat input and/or maximum horsepower rating:</b>			<b>Type and Btu/hr rating of burners:</b>
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
<b>Fuel Type</b>	<b>Max. Sulfur Content</b>	<b>Max. Ash Content</b>	<b>BTU Value</b>

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--
Particulate Matter (PM <sub>2.5</sub> )	--	--
Particulate Matter (PM <sub>10</sub> )	--	--
Total Particulate Matter (TSP)	--	--
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	0.018
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
Other Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p><b>Notes:</b></p> <p>Total emissions are for all units associated with Liquid Storage Tank Sources.</p>		
<b><i>Applicable Requirements</i></b>		
<p><b>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (<i>Note: Title V permit condition numbers alone are not the underlying applicable requirements</i>). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.</b></p> <p><b>Applicable Requirements</b></p>		
<p><input checked="" type="checkbox"/> Permit Shield</p>		



**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

**Monitoring Requirements**

**Testing Requirements**

**Recordkeeping Requirements**

**Reporting Requirements**

**Are you in compliance with all applicable requirements for this emission unit? Yes**

**If no, complete the Schedule of Compliance Form as ATTACHMENT F.**

Attachment G

Air Pollution Control Device Forms

### ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #1	<b>List all emission units associated with this control device.</b> CRUSH2, CONV3, CONV2	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-T4-32	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

**Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).**

Indicator Range for Pressure Drop (in H2O): 1.4-3.0

**Is this device subject to the CAM requirements of 40 C.F.R. 64? No**

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification**

Uncontrolled emission factors in AP-42 Chapter 11.19.2, Table 11.19.2-2 "Crushed Stone Processing Operations (8/04)"

**Describe the parameters monitored and/or methods used to indicate performance of this control device.**

The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.

## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> WSc #2	<b>List all emission units associated with this control device.</b> CRUSH3	
<b>Manufacturer:</b> Sly	<b>Model number:</b> Impinjet 270	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone	
Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank	
Carbon Drum(s)	X	Other Wet Scrubber	Settling Chamber
Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator	
Thermal Incinerator	Flare	Other (describe	
Wet Plate Electrostatic Precipitator			

List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	> 98%
PM10	99.99%	> 98%
PM2.5	99.99%	> 98%

**Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).**

Indicator Range for Pressure Drop (in H2O): 1.5-7.0

**Is this device subject to the CAM requirements of 40 C.F.R. 64? No**

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification**

Uncontrolled emission factors in AP-42 Chapter 11.19.2, Table 11.19.2-2 "Crushed Stone Processing Operations (8/04)"

**Describe the parameters monitored and/or methods used to indicate performance of this control device.**

The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.

## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> WSc #3	<b>List all emission units associated with this control device.</b> DRYER1 (3s)	
<b>Manufacturer:</b> Sly	<b>Model number:</b> Impinjet 1130	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>		
Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
Carbon Drum(s)	<input checked="" type="checkbox"/> Other Wet Scrubber	Settling Chamber
Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
Thermal Incinerator	Flare	Other (describe
Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	> 98%
PM10	99.99%	> 98%
PM2.5	99.99%	> 98%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-5.8		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
---

<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
---

## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #6	<b>List all emission units associated with this control device.</b> VIBFD5, ELEV4, CONV39-41, CONV29, CONV30, BE01, BE02, LS01	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit 2DFA - 155	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-5.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? No</b> If Yes, <b>Complete ATTACHMENT H</b> If No, <b>Provide justification</b> Uncontrolled emission factors in AP-42 Chapter 11.19.2, Table 11.19.2-2 "Crushed Stone Processing Operations (8/04)"
--

<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
---

## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #7	<b>List all emission units associated with this control device.</b> SCREN10-13 & SCREN2-4, SCREN17 (1E), ELEV1, ELEV2, ELEV3, CONV31, CONV33, TANK#13 & #17, TANK #7 & #8, TANK #15 & #16, TANK #14 & #18	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DFT-32-SH	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 3.0-5.5		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? No</b> If Yes, <b>Complete ATTACHMENT H</b> If No, <b>Provide justification</b> Uncontrolled emission factors in AP-42 Chapter 11.19.2, Table 11.19.2-2 "Crushed Stone Processing Operations (8/04)"
--

<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> WSc #8	<b>List all emission units associated with this control device.</b> DRYER2 (8s)	
<b>Manufacturer:</b> In House	<b>Model number:</b> NA	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
Baghouse/Fabric Filter		Venturi Scrubber	Single Cyclone
Carbon Bed Adsorber		Packed Tower Scrubber	Cyclone Bank
Carbon Drum(s)	X	Other Wet Scrubber	Settling Chamber
Catalytic Incinerator		Condenser	Dry Plate Electrostatic Precipitator
Thermal Incinerator		Flare	Other (describe
Wet Plate Electrostatic Precipitator			

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	> 90%
PM10	99.99%	> 90%
PM2.5	99.99%	> 90%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 0.5-2.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
---

<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
---



## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #9	<b>List all emission units associated with this control device.</b> SCREN18 (1E), PACKR8 (IE), ELEV 19, ELEV20, ISTANK18, Steel Storage Tank, and SPOUT4	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit 4DFT-32-155	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 1.5-4.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? No</b> If Yes, <b>Complete ATTACHMENT H</b> If No, <b>Provide justification</b> Uncontrolled emission factors in AP-42 Chapter 11.19.2, Table 11.19.2-2 "Crushed Stone Processing Operations (8/04)"
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #10	<b>List all emission units associated with this control device.</b> SCREW3, #1 MILL FEED BIN, #2 MILL FEED BIN, FEEDB1, FEEDB2, SCREW6, AIRSD7, ELEV6, ELEV7	
<b>Manufacturer:</b> Mikropul	<b>Model number:</b> CFH 40T-20-B	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-3.5		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
---

<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #11	<b>List all emission units associated with this control device.</b> SCREW5, #3 MILL FEED BINS, #4 MILL FEED BIN, FEEDB3, FEEDB4, SCREW7, AIRSD8, ELEV8, ELEV9, PNEU4, AIRSI13 and ELEV16	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DFT 4-48	<b>Installation date:</b> 3-15-2012

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 0.5-6.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
---

<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #12	<b>List all emission units associated with this control device.</b> #5 MILL FEED BIN, FEEDB5, MILL6, ELEV10, #6 MILL FEED BIN, FEEDB6, AIRSD3, ELEV11, ELEV15, PNEU2, BIN7, #1 AND #2 PUMPS, AIRSI12, TAILING BINS	
<b>Manufacturer:</b> Mikropul	<b>Model number:</b> CFH 40T-20-B	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

**Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).**

Indicator Range for Pressure Drop (in H2O): 2.0-3.5

**Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes**

If Yes, **Complete ATTACHMENT H** CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014).

If No, **Provide justification**

**Describe the parameters monitored and/or methods used to indicate performance of this control device.**

The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.

## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #13	<b>List all emission units associated with this control device.</b> ELEV23, CGS Tank, PEMCO Tank, SPOUT6	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-T3-24	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 1.8-4.5		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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### ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #15	<b>List all emission units associated with this control device.</b> ELEV25, FEEDB25, FEEDB26, SCREN25, BIN25, and PNEU25	
<b>Manufacturer:</b> Cellulosic	<b>Model number:</b> Cartridge Filter	<b>Installation date:</b> 2016

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-3.5
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<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2016 R13 application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R13-2595A). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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### ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> 1C	<b>List all emission units associated with this control device.</b> 1S, 2S, 3S, and 4S	
<b>Manufacturer:</b> Torit	<b>Model number:</b> DFT2-4-155	<b>Installation date:</b> 2016

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b>
Indicator Range for Pressure Drop (in H2O): 2.0-3.5

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b>
If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2016 R13 application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R13-2595A).
If No, <b>Provide justification</b>

<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>
The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.

### ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> 2C	<b>List all emission units associated with this control device.</b> 5S	
<b>Manufacturer:</b> Mikropul Torit	<b>Model number:</b> 8204B Baghouse DF2DF4	<b>Installation date:</b> 2016

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-3.5
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<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2016 R13 application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R13-2595A). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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### ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #45	<b>List all emission units associated with this control device.</b> AIRSE25	
<b>Manufacturer:</b> Ecutech	<b>Model number:</b> Cartridge Filter	<b>Installation date:</b> 2016

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

**Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).**

Indicator Range for Pressure Drop (in H2O): 2.0-3.5

**Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes**

If Yes, **Complete ATTACHMENT H** CAM Plan was submitted with 2016 R13 application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R13-2595A).

If No, **Provide justification**

**Describe the parameters monitored and/or methods used to indicate performance of this control device.**

The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.

### ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #46	<b>List all emission units associated with this control device.</b> HOPPER25	
<b>Manufacturer:</b> Cellulosic	<b>Model number:</b> Cartridge Filter	<b>Installation date:</b> 2016

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-3.5
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<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2016 R13 application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R13-2595A). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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### ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #47	<b>List all emission units associated with this control device.</b> TANK25	
<b>Manufacturer:</b> Cellulosic	<b>Model number:</b> Cartridge Filter	<b>Installation date:</b> 2016

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

**Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).**

Indicator Range for Pressure Drop (in H2O): 2.0-3.5

**Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes**

If Yes, **Complete ATTACHMENT H** CAM Plan was submitted with 2016 R13 application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R13-2595A).

If No, **Provide justification**

**Describe the parameters monitored and/or methods used to indicate performance of this control device.**

The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.

## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #20	<b>List all emission units associated with this control device.</b> PACKR3 and PACKR4	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-T4-16	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 1.6-5.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b>  If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>  The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #25	<b>List all emission units associated with this control device.</b> CONV25, SCREN16, CONV26, and CONV27	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-4DF-48	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 1.0-3.6		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #27	<b>List all emission units associated with this control device.</b> CONV51, PULVERIZER TANK #19, PULVERIZER TANK #20, TANKS #9-#12, STEEL TANK #21, SPOUT1, SPOUT2	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-T2-8	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-4.5		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #28	<b>List all emission units associated with this control device.</b> MIN-U-SIL storage silos #6 & #7 (7e & E1), MIN-U-SIL Storage Silo #8 (63 & E1), SPOUT5	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-2D-F4	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 0.6-6.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #29	<b>List all emission units associated with this control device.</b> Minusil storage silo #5 (5e)	
<b>Manufacturer:</b> Micropul	<b>Model number:</b> CFH-18-20-VB	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 0.5-1.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #33	<b>List all emission units associated with this control device.</b> Supersil storage silos #1 - #4 (1e-4e)	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-T4-16	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 1.4-5.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #34	<b>List all emission units associated with this control device.</b> PACKR5 (1e & 2e), SPOUT3	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-2DF-4	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 0.5-5.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #36	<b>List all emission units associated with this control device.</b> SCREN 7-9 and 14-15 (1E)	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-T2-8	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 0.5-2.5		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #37	<b>List all emission units associated with this control device.</b> 5 Micron Feed Bin, ELEV17, and BIN5	
<b>Manufacturer:</b> Micropul	<b>Model number:</b> CFH-8-20	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 1.5-5.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #38	<b>List all emission units associated with this control device.</b> BIN4, BIN 4 SPOUT, and PACKR7	
<b>Manufacturer:</b> Micropul	<b>Model number:</b> CFH-18-20-VB	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-4.5		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b>  If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014).  If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>  The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #39	<b>List all emission units associated with this control device.</b> ELEV14	
<b>Manufacturer:</b> Micropul	<b>Model number:</b> CFH 8-20-V	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 1.0-3.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
---

<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #40	<b>List all emission units associated with this control device.</b> PACKR1	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-T2-8	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 0.75-2.2		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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<b>Control device ID number:</b> CF #41	<b>List all emission units associated with this control device.</b> BF1, Screen 21, ELEV22, ELEV24, AIRSD1, Airslide 100	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> DFT2-4-155	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 0.5-6.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Control device ID number:</b> CF #42	<b>List all emission units associated with this control device.</b> #3 Microsizer, PNEU1	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> DFT2-4-155	<b>Installation date:</b> Unknown



**Type of Air Pollution Control Device:**

X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

**List the pollutants for which this device is intended to control and the capture and control efficiencies.**

Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

**Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).**

Indicator Range for Pressure Drop (in H<sub>2</sub>O): 1.5-5.0

**Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes**

If Yes, **Complete ATTACHMENT H** CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014).

If No, **Provide justification**

## Attachment H

### Compliance Assurance Monitoring (CAM) Forms

All PSEUs and/or associated control devices were addressed in previous Title V renewal applications. No changes to the prior CAM forms and plan are necessary.

## ATTACHMENT H - Compliance Assurance Monitoring (CAM) Plan Form

For definitions and information about the CAM rule, please refer to 40 CFR Part 64. Additional information (including guidance documents) may also be found at <http://www.epa.gov/ttn/emc/cam.html>

### CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to **EACH** regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet **all** of the following criteria (*If No, then the remainder of this form need not be completed*):

YES  NO

- a. The PSEU is located at a major source that is required to obtain a Title V permit;
- b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is **NOT** exempt;

#### LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
  - Stratospheric Ozone Protection Requirements.
  - Acid Rain Program Requirements.
  - Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
  - An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).
- c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;
- d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; AND
- e. The PSEU is **NOT** an exempt backup utility power emissions unit that is municipally-owned.

### BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit:

**RENEWAL APPLICATION.** **ALL** PSEUs for which a CAM plan has **NOT** yet been approved need to be addressed in this CAM plan submittal.

**INITIAL APPLICATION** (submitted after 4/20/98). **ONLY** large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.

**SIGNIFICANT MODIFICATION TO LARGE PSEUs.** **ONLY** large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, **Only** address the appropriate monitoring requirements affected by the significant modification.

**3) <sup>a</sup> BACKGROUND DATA AND INFORMATION**

Complete the following table for **all** PSEUs that need to be addressed in this CAM plan submittal. This section is to be used to provide background data and information for each PSEU In order to supplement the submittal requirements specified in 40 CFR §64.4. If additional space is needed, attach and label accordingly.

PSEU DESIGNATION	DESCRIPTION	POLLUTANT	CONTROL DEVICE	<sup>b</sup> EMISSION LIMITATION or STANDARD	<sup>c</sup> MONITORING REQUIREMENT
CF #11	Mill Processing control device	Particulate matter, PM-10	Dry filter dust collector	Allowable PM Stack Emissions: 37 lb/hr [45CSR§7-4.1] [Stack 11]	Differential pressure gauges for the filters shall be operated continuously during operation of the emission units. [40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.]  Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1. [45CSR§30-5.1c]
<u>EXAMPLE</u> Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c.; 9.0 lb/hr	Monitor pressure drop across multiclone: Weekly inspection of multiclone

<sup>a</sup> If a control device is common to more than one PSEU, one monitoring plan may be submitted for the control device with the affected PSEUs identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a). If a single PSEU is controlled by more than one control device similar in design and operation, one monitoring plan for the applicable control devices may be submitted with the applicable control devices identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a).

<sup>b</sup> Indicate the emission limitation or standard for any applicable requirement that constitutes an emission limitation, emission standard, or standard of performance (as defined in 40 CFR §64.1).

<sup>c</sup> Indicate the monitoring requirements for the PSEU that are required by an applicable regulation or permit condition.

**CAM MONITORING APPROACH CRITERIA**

Complete this section for EACH PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. If more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.

<b>4a) PSEU Designation:</b> CF #11	<b>4b) Pollutant:</b> PM-10	<b>4c) <sup>a</sup> Indicator No. 1:</b> Differential pressure	<b>4d) <sup>a</sup> Indicator No. 2:</b> Visible emissions
<b>5a) GENERAL CRITERIA</b> Describe the <u>MONITORING APPROACH</u> used to measure the indicators:		Differential pressure	Visible emissions using 40 CFR Part 60, Appendix A, Method 22
<sup>b</sup> Establish the appropriate <u>INDICATOR RANGE</u> or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:		0.5 to 6.0 (in wc)	No visible emissions for more than six minutes.
<b>5b) PERFORMANCE CRITERIA</b> Provide the <u>SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA</u> , such as detector location, installation specifications, and minimum acceptable accuracy:		Equipment: Differential pressure Gauge.  Monitoring location: Across inlet and outlet ducts.	In accordance with the monitoring requirements identified under Method 22.
<sup>c</sup> For new or modified monitoring equipment, provide <u>VERIFICATION PROCEDURES</u> , including manufacturer's recommendations, <u>TO CONFIRM THE OPERATIONAL STATUS</u> of the monitoring:		NA	NA
Provide <u>QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES</u> that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):		Calibrate, maintain, and operate instruments using procedures that take into account manufacturer's recommendations.	Calibrate, maintain, and operate instruments using procedures that take into account manufacturer's recommendations.
<sup>d</sup> Provide the <u>MONITORING FREQUENCY</u> :		Once per day	At least each calendar week during periods of normal facility operation
Provide the <u>DATA COLLECTION PROCEDURES</u> that will be used:		Operators log data manually	Observers complete opacity or VE observation forms and log into binder.
Provide the <u>DATA AVERAGING PERIOD</u> for the purpose of determining whether an excursion or exceedance has occurred:		Once per day	The duration of each EPA Method 22 test must be at least 15 minutes, and visible emissions will be considered to be present if they are detected for more than six minutes of the fifteen minute period.

<sup>a</sup> Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

<sup>b</sup> Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

<sup>c</sup> The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

<sup>d</sup> Emission units with post-control PTE ≥ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

**RATIONALE AND JUSTIFICATION**

Complete this section for EACH PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:  
CF #11

6b) Regulated Air Pollutant:  
PM-10

7) **INDICATORS AND THE MONITORING APPROACH:** Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer's recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

Pressure differential: Decreases in pressure differential would indicate increases in gas flow or poor distribution across the filter media; increases in pressure differential would indicate filter clogging or decreased gas flow from sources.

8) **INDICATOR RANGES:** Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how EACH indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.
- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.
- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

**RATIONALE AND JUSTIFICATION:**

Engineering judgment, historical plant records of pressure differential as a maintenance indicator, and manufacturer's specifications.

## Potential to Emit Calculations

**Input Data**

Company Name: U.S. Silica  
 Site Name: Berkeley Springs Plant  
 Project: Potential to Emit Calculations

**Input for Material Transfer, Screening, and Crushing Calculations**

Process	Activity	Throughput * (tons/hour)	Control Method	Title V ID
Primary Crushing	Truck Unloading - Fragmented Stone	1,000	None	VIBFD1
Primary Crushing	Primary Crushing (Jaw) - Dry	800	Fabric Filter - No Enclosure	CRUSH2
Primary Crushing	Conveyor Transfer - Dry	800	Fabric Filter	CONV3
Primary Crushing	Conveyor Transfer - Dry	800	Fabric Filter	CONV2
Primary Crushing	Conveyor Transfer - Dry	800	None	CONV1
Primary Crushing	Conveyor Transfer - Dry	800	Partial Enclosure (skirt)	Reclaim Stockpile
Secondary Crushing	Conveyor Transfer - Dry	400	Partial Enclosure (skirt)	VIBFD2
Secondary Crushing	Conveyor Transfer - Dry	400	Partial Enclosure	CONV4
Secondary Crushing	Conveyor Transfer - Dry	400	Full Enclosure (boot)	CONV5
Secondary Crushing	Secondary Crushing (All) - Dry	400	Wet Scrubber	CRUSH3
Secondary Crushing	Conveyor Transfer - Dry	400	Full Enclosure (boot)	CONV7
Secondary Crushing	Conveyor Transfer - Dry	400	Full Enclosure (boot)	CONV6
Storage Structures	Conveyor Transfer - Dry	400	Enclosed by Building	#1 Stone Tank
Secondary Crushing	Conveyor Transfer - Dry	400	Full Enclosure (boot)	CONV8
Storage Structures	Conveyor Transfer - Dry	400	Enclosed by Building	#2 Stone Tank
Wet Processing Plant	Conveyor Transfer - Dry	200	Full Enclosure (boot)	CONV12
Wet Processing Plant	Conveyor Transfer - Dry	200	Full Enclosure (boot)	CONV13
Wet Processing Plant	Conveyor Transfer - Dry	200	Full Enclosure (boot)	CONV14
Wet Processing Plant	Fines Crushing (All) - Wet Suppression	200	Full Enclosure (boot)	MILL1
Wet Processing Plant	Conveyor Transfer - Wet Suppression	150	Saturated Material (No Visible Emissions)	CONV15
Wet Processing Plant	Screening (All) - Wet Suppression	200	Full Enclosure (boot)	SCREN1
Wet Processing Plant	Screening (All) - Wet Suppression	200	Saturated Material (No Visible Emissions)	CLASS4&7
Wet Processing Plant	Screening (All) - Wet Suppression	200	Saturated Material (No Visible Emissions)	FERRO1
Wet Processing Plant	Screening (All) - Wet Suppression	160	Saturated Material (No Visible Emissions)	FCell
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	None	TANK2
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	Saturated Material (No Visible Emissions)	PIPE1
Wet Processing Plant	Screening (All) - Wet Suppression	200	Full Enclosure (boot)	WETSE1 - WETSE5
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	Full Enclosure (boot)	CONV17
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	Saturated Material (No Visible Emissions)	CONV18
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	Full Enclosure (boot)	CONV19
Miscellaneous	Conveyor Transfer - Wet Suppression	200	Enclosed by Building	Stockpile
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	Partial Enclosure (skirt)	CONV21
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	Partial Enclosure (skirt)	CONV23
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	Full Enclosure (boot)	CONV20 & CONV22
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	None	VIBFD4
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	Partial Enclosure (skirt)	CONV24
Wet Processing Plant	Conveyor Transfer - Dry	200	Wet Scrubber	DRYER #1 (3s)
Wet Processing Plant	Screening (All) - Dry	200	Fabric Filter	SCREN16
Wet Processing Plant	Conveyor Transfer - Dry	200	Fabric Filter	CONV25
Wet Processing Plant	Conveyor Transfer - Dry	50	Full Enclosure (boot)	CONV54
Wet Processing Plant	Fines Crushing (All) - Dry	50	Full Enclosure (boot)	MILL8
Wet Float Plant	Conveyor Transfer - Dry	25	Saturated Material (No Visible Emissions)	Slurry Pumps
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Saturated Material (No Visible Emissions)	CYCL04 & CYCL05
Wet Float Plant	Screening (All) - Wet Suppression	25	Saturated Material (No Visible Emissions)	FERRO2
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Saturated Material (No Visible Emissions)	CYCL03
Wet Float Plant	Screening (All) - Wet Suppression	25	Enclosed by Building	CLASS5
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Enclosed by Building	Conditioner
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Enclosed by Building	Floatation
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	None	Vacuum Table
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Enclosed by Building	SCREW21
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Enclosed by Building	CONV48
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Saturated Material (No Visible Emissions)	Drain Shed
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Enclosed by Building	CONV50
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Enclosed by Building	CONV49
Wet Float Plant	Conveyor Transfer - Dry	25	Wet Scrubber	DRYER #2 (8S)
Wet Float Plant	Conveyor Transfer - Dry	25	Enclosed by Building	SCREW22
Wet Float Plant	Conveyor Transfer - Dry	25	Fabric Filter	ELEV19
Wet Float Plant	Screening (All) - Dry	50	Fabric Filter	SCREN18 (1E)
Wet Float Plant	Conveyor Transfer - Dry	25	Fabric Filter	ELEV20
Wet Float Plant	Conveyor Transfer - Dry	25	Fabric Filter	ISTANK18
Wet Float Plant	Conveyor Transfer - Dry	25	Fabric Filter	Steel Storage Tank
Wet Float Plant	Conveyor Transfer - Dry	30	Fabric Filter	PACKR8 (1E)
Wet Float Plant	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	SPOUT4
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Saturated Material (No Visible Emissions)	CONV46
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Saturated Material (No Visible Emissions)	CONV47
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	200	Fabric Filter	CONV26
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	200	Fabric Filter	CONV27
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	200	Fabric Filter	ELEV4
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	200	Fabric Filter	VIBFD5
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	200	Fabric Filter	CONV39-41
Screening and Unground Sanding Processing	Screening (All) - Dry	375	Fabric Filter	SCREN7-9 & SCREN14-15 (1E)
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	30	Fabric Filter	CONV30
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	30	Fabric Filter	ELEV2



**Input Data**

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

Screening and Unground Sanding Processing	Conveyor Transfer - Dry	75	Fabric Filter	ELEV3
Screening and Unground Sanding Processing	Screening (All) - Dry	75	Fabric Filter	SCREN10-13 & SCREN2-4
Screening and Unground Sanding Processing	Screening (All) - Dry	50	Fabric Filter	SCREN17 (1E)
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	200	Fabric Filter	CONV33
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	200	None	CONV34
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	125	Fabric Filter	CONV29
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	75	Fabric Filter	ELEV1
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	75	Fabric Filter	CONV31
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	75	Fabric Filter	CONV32
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	Tanks #9 - #12
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	Tank #7 & #8
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	Tank #15 & #16
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	Tank #13 & #17
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	Tank #14 & #18
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	110	Full Enclosure (boot)	CONV36
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	110	Full Enclosure (boot)	CONV37
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	100	Fabric Filter - Partial Enclosure	Steel Tank #21
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Full Enclosure (boot)	QROK SPOUTS
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter	BE01 (E2)
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter	BE02 (E2)
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	LS01 (FE3)
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	36	Fabric Filter	PACKR1
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	200	Fabric Filter	CONV51
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	SPOUT1
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	SPOUT2
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	300	Full Enclosure (boot)	MOB-CONV
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	100	Full Enclosure (boot)	BE-03
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Full Enclosure (boot)	C Silo
Milling	Conveyor Transfer - Dry	150	Fabric Filter	Pulverizer Tank #19
Milling	Conveyor Transfer - Dry	100	Fabric Filter	#1 Mill Feed Bin
Milling	Conveyor Transfer - Dry	100	Fabric Filter	#2 Mill Feed Bin
Milling	Conveyor Transfer - Dry	15	Fabric Filter	FEEDB1
Milling	Conveyor Transfer - Dry	15	Fabric Filter	FEEDB2
Milling	Fines Crushing (All) - Dry	100	Full Enclosure (boot)	MILL2
Milling	Fines Crushing (All) - Dry	100	Full Enclosure (boot)	MILL3
Milling	Conveyor Transfer - Dry	100	Fabric Filter	SCREW6
Milling	Conveyor Transfer - Dry	100	Fabric Filter	AIRSD7
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV6
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV7
Milling	Conveyor Transfer - Dry	30	Fabric Filter	SCREW3
Milling	Conveyor Transfer - Dry	30	Fabric Filter	SCREW5
Milling	Conveyor Transfer - Dry	100	Fabric Filter	#3 Mill Feed Bin
Milling	Conveyor Transfer - Dry	100	Fabric Filter	#4 Mill Feed Bin
Milling	Conveyor Transfer - Dry	15	Fabric Filter	FEEDB3
Milling	Conveyor Transfer - Dry	15	Fabric Filter	FEEDB4
Milling	Fines Crushing (All) - Dry	100	Full Enclosure (boot)	MILL4
Milling	Fines Crushing (All) - Dry	100	Full Enclosure (boot)	MILL5
Milling	Conveyor Transfer - Dry	100	Fabric Filter	SCREW7
Milling	Conveyor Transfer - Dry	100	Fabric Filter	AIRSD8
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV8
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV9
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	SCREW16
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	SCREW17
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSE3
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSE4
Milling	Conveyor Transfer - Dry	30	Full Enclosure (boot)	SCREW4
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSE1
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSE2
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSD9
Milling	Conveyor Transfer - Dry	150	Fabric Filter	Pulverizer Tank # 20
Milling	Conveyor Transfer - Dry	100	Fabric Filter	#5 Mill Feed Bin
Milling	Conveyor Transfer - Dry	100	Fabric Filter	#6 Mill Feed Bin
Milling	Conveyor Transfer - Dry	15	Fabric Filter	FEEDB5
Milling	Conveyor Transfer - Dry	15	Fabric Filter	FEEDB6
Milling	Fines Crushing (All) - Dry	100	Fabric Filter	MILL6
Milling	Fines Crushing (All) - Dry	100	Full Enclosure (boot)	MILL7
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSD2
Milling	Conveyor Transfer - Dry	100	Fabric Filter	AIRSD3
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV10
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV11
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSE5
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSE6
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	SCREW18
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	SCREW19
Milling	Conveyor Transfer - Dry	100	Fabric Filter	AIRSD1
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV 22
Milling	Conveyor Transfer - Dry	8	Fabric Filter	Airslide 100
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV24
Milling	Fines Screening (All) - Dry	25	Fabric Filter	Screen21
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSD1-GENERIC
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV15
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	BIN2
Milling	Conveyor Transfer - Dry	20	Fabric Filter	BF1
Milling	Screening (All) - Dry	25	Fabric Filter	Microsizer #3
Milling	Conveyor Transfer - Dry	15	Fabric Filter	PNEU1
Milling	Fines Screening (All) - Dry	85	Fabric Filter	AIRSD12
Milling	Fines Screening (All) - Dry	85	Fabric Filter	AIRSD13
Milling	Conveyor Transfer - Dry	120	Fabric Filter	Tailing Bins
Milling	Conveyor Transfer - Dry	15	Fabric Filter	PNEU2
Milling	Conveyor Transfer - Dry	15	Fabric Filter	PNEU4
Milling	Conveyor Transfer - Dry	15	Fabric Filter	#1 & #2 Pumps
Milling	Conveyor Transfer - Dry	15	Fabric Filter	BIN7
Micron Production	Conveyor Transfer - Dry	10	Fabric Filter	BIN4

**Input Data**

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

Micron Production	Conveyor Transfer - Dry	150	Fabric Filter	5 Micron Feed Bin
Micron Production	Fines Screening (All) - Dry	20	Full Enclosure (boot)	AIRSEB-16, 18 &19
Micron Production	Conveyor Transfer - Dry	150	Fabric Filter	ELEV17
Micron Production	Conveyor Transfer - Dry	150	Fabric Filter	ELEV16
Micron Production	Conveyor Transfer - Dry	10	Fabric Filter	BIN5
Storage Structures	Conveyor Transfer - Dry	10	Fabric Filter - Partial Enclosure	BIN4 SPOUT
Micron Production	Conveyor Transfer - Dry	15	Fabric Filter	PACKR7
Milling	Conveyor Transfer - Dry	150	Fabric Filter	ELEV14
Storage Structures	Conveyor Transfer - Dry	125	Fabric Filter	Supersil Storage Silos #1 - #4 (1e-4e)
Storage Structures	Conveyor Transfer - Dry	100	Fabric Filter	MIN-U-SIL storage silo #8 (6e & F1)
Storage Structures	Conveyor Transfer - Dry	125	Fabric Filter	MIN-U-SIL storage silo #5 (5e)
Storage Structures	Conveyor Transfer - Dry	100	Fabric Filter	MIN-U-SIL storage silos #6 & #7 (6e & F1)
Micron Production	Conveyor Transfer - Dry	20	Fabric Filter	PACKR3
Micron Production	Conveyor Transfer - Dry	20	Fabric Filter	PACKR4
Storage Structures	Conveyor Transfer - Dry	200	Fabric Filter - Partial Enclosure	SPOUT3
Micron Production	Conveyor Transfer - Dry	15	Fabric Filter	PACKR5 (1e & 2e)
Storage Structures	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	SPOUT5
Micron Production	Conveyor Transfer - Dry	100	Fabric Filter	ELEV23
Storage Structures	Conveyor Transfer - Dry	800	Fabric Filter	CGS Tank
Storage Structures	Conveyor Transfer - Dry	250	Fabric Filter	PEMCOtank
Storage Structures	Conveyor Transfer - Dry	250	Fabric Filter - Partial Enclosure	SPOUT6
Miscellaneous	Drilling	1,000	None	
Miscellaneous	Truck Loading - Crushed Stone	1,000	None	

A. Throughputs based on TVOP Application Forms  
 B. Control methods and release points from Title V permit and Process Flow Diagram provided by US Silica.

**Input for Limestone System**

Process	Process Unit Description	Throughput <sup>A</sup> (tons/year)
Limestone	1 - Crushing	4,380,000
Limestone	2 - Screening	4,380,000
Limestone	3 - Transfer Points	4,380,000
Limestone	4 - Stockpiles	4,380,000
Limestone	5 - Unpaved Haul Roads	

**Input for Baghouse Calculations**

Process Unit Description	Flowrate <sup>A</sup> (dscfm)	Outlet Grain Loading <sup>B</sup> (gr/dscft)	Annual Hours of Operation <sup>C</sup> (hrs/year)	MMDSF per Year
Fluid Bed Dryer & Rotary Dryer			8,760	
Screening and Unground Sanding Processing CF#40	5,500	0.014	8,760	2891
Screening and Unground Sanding Processing CF#6	20,000	0.014	8,760	10512

Fluid Bed Dryer  
 Dust Collector #40  
 Dust Collector #6

A. Flowrates based on make and model specifications.  
 B. Outlet grain loading from TVOP Outlet Grain Loading Limits  
 C. Annual hours of operation are assumed to be 8,760 hr/yr.

**Input for Unpaved Road Emission Calculations**

Vehicle Type	Product Handled	Weight Empty <sup>A</sup> (tons)	Weight Full <sup>B</sup> (tons)
Haul Trucks/Trucks	Quarried material	68	158

A. Truck weight when empty from specification sheet for Euclid R858 haul truck  
 B. Truck weight when loaded from specification sheet for Euclid R858 haul truck

Title V ID	Source Description	Trip Description	Vehicle Type	Product Handled	Annual Throughput <sup>A</sup> (tons/year)	Roundtrip Length <sup>B</sup> (miles/trip)
Roads	Facility Roadways	Unpaved Haul Roads	Haul Trucks/Trucks	Quarried material	8,760,000	2.00
Roads	Facility Roadways	Unpaved Plant Traffic	Haul Trucks/Trucks	Quarried material	8,760,000	1.00
Roads	Facility Roadways - Limestone	Unpaved Plant Traffic	Haul Trucks/Trucks	Quarried material	4,380,000	0.40

A. Annual throughput based on maximum quarry throughput.  
 B. Average round trip length estimate provided by U.S. Silica. Assumed 2 miles of total trip on haul roads and 1 mile of total trip on unpaved plant roads.

**Input for Combustion Emission Calculations**

Title V ID	Source Description	Process Unit Description	Fuel Type <sup>A</sup>	Fuel Heating Value (MMBtu/MMSCF or MMBtu/1,000 gal)	Propane Throughput <sup>C</sup> (1,000 gallons/yr)	Natural Gas Throughput <sup>C</sup> (MMSCF/yr)	Fuel Oil Throughput <sup>C</sup> (1,000 gal/yr)
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	150.00			4,146.40
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	150.00			4,146.40
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	91.50			6,797.38
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	140.00			4,442.57
Dryer #1	Wet Processing Plant	Fluid Bed Dryer- Natural Gas Combustion	Natural Gas	1,020.00		609.76	
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	91.50	1,637.11		

A. Fuel types provided by U.S. Silica  
 B. Higher heating values based on AP-42 conversion factors where not specified in permit.  
 C. Annual consumption of each fuel type assumed to be max fuel consumption operating at 8760 hr/yr.

Fuel Type	Sulfur Content in Fuel (%)	Reference	Ash Content in Fuel (%)	Reference	Density (lb/gal)
Recycled Oil	1.5	TVOP Limit	0	U.S. Silica Records	7.351
No. 2 Fuel Oil	0.2	TVOP Limit	0	Replace with site data when available.	-
No. 6 Fuel Oil	1.5	TVOP Limit	0	Replace with site data when available.	-

A. Fuel ash content based on U.S. Silica records and a 20% compliance margin.

**Input for Permitted Limit Emission Calculations**

Title V ID	Emission Factor <sup>A,B</sup>			Input Data	
	Value	Units	Pollutant	Value	Units
Material Transfer/Conveying	1	lb/hr	PM	8,760	hrs/year
Material Transfer/Conveying	1	lb/hr	PM10	8,760	hrs/year
Material Transfer/Conveying	0.8	lb/hr	PM2.5	8,760	hrs/year
Screening	0.685	lb/hr	PM	8,760	hrs/year
Screening	0.685	lb/hr	PM10	8,760	hrs/year
Screening	0.548	lb/hr	PM2.5	8,760	hrs/year
Bulk Load and BFS Bagger	0.685	lb/hr	PM	8,760	hrs/year
Bulk Load and BFS Bagger	0.685	lb/hr	PM10	8,760	hrs/year
Bulk Load and BFS Bagger	0.548	lb/hr	PM2.5	8,760	hrs/year
Bulk Bagger	0.1	lb/hr	PM	8,760	hrs/year
Bulk Bagger	0.1	lb/hr	PM10	8,760	hrs/year
Bulk Bagger	0.08	lb/hr	PM2.5	8,760	hrs/year
#6 Silo	0.05	lb/hr	PM	8,760	hrs/year
#6 Silo	0.05	lb/hr	PM10	8,760	hrs/year
#6 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year
#7/#8 Silo	0.70	lb/hr	PM	8,760	hrs/year
#7/#8 Silo	0.70	lb/hr	PM10	8,760	hrs/year
#7/#8 Silo	0.56	lb/hr	PM2.5	8,760	hrs/year
#5 Silo	0.05	lb/hr	PM	8,760	hrs/year
#5 Silo	0.05	lb/hr	PM10	8,760	hrs/year

**Input Data**

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

#5 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year
#4 Silo	0.05	lb/hr	PM	8,760	hrs/year
#4 Silo	0.05	lb/hr	PM10	8,760	hrs/year
#4 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year
#3 Silo	0.05	lb/hr	PM	8,760	hrs/year
#3 Silo	0.05	lb/hr	PM10	8,760	hrs/year
#3 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year
#2 Silo	0.05	lb/hr	PM	8,760	hrs/year
#2 Silo	0.05	lb/hr	PM10	8,760	hrs/year
#2 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year
#1 Silo	0.05	lb/hr	PM	8,760	hrs/year
#1 Silo	0.05	lb/hr	PM10	8,760	hrs/year
#1 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year

A. Emission factors from Title V permit.  
 B. Assume PM<sub>10</sub> emissions = PM emissions. PM<sub>2.5</sub> emission factors assumed to be 80% of PM<sub>10</sub> emission factors.

**Input for Stockpile Emission Calculations**

Title V ID	Stockpile Area <sup>A</sup> (acres)	Number of Active Days per Year <sup>B</sup> (days/year)	Control Method
Golf Sand Stockpile & Float Sand Stockpile	5.63	365	None
Reclaim Stockpile	1,386	365	Partial Enclosure (skirt)

A. Assumed same stockpile area that was reported for Reporting Year 2016. Reclaim stockpile area estimated from Google Earth.  
 B. Active stockpiles are those piles that have at least 8 hours of activity per 24 hours.

**Input for Blasting Emission Calculations**

Title V ID	Amount of Material Removed per Blast <sup>A</sup> (tons)	Total Amount Removed <sup>B</sup> (tons)	Control Method	Horizontal Area Removed per Blast <sup>A</sup> (ft <sup>2</sup> )	Number of Blasts per Year <sup>C</sup>
Quarry	171,765	8,760,000	None	5978.82	51

A. Horizontal area removed per blast from U.S. Silica data  
 B. Total amount of material removed assumed to be maximum potential material processed downstream.  
 C. Number of blasts per year from 2022 Blast Records and 20% compliance margin.

**Input for Tank Emission Calculations**

Process	Capacity (gallons)	Material	Title V ID
Diesel Fuel Tank	10,000	Diesel	Tank No. 1
Used Oil Tank at Maintenance garage	275	Used Oil	Tank No. 2
Used Oil Tank at Maintenance garage	275	Used Oil	Tank No. 3
#1 Oil Tank at Maintenance garage	275	Oil	Tank No. 4
#2 Oil Tank at Maintenance garage	275	Oil	Tank No. 5
#3 Oil Tank at Maintenance garage	275	Oil	Tank No. 6
#4 Oil Tank at Maintenance garage	275	Oil	Tank No. 7
Recycled Oil Tank near Float Plant	10,000	Recycled Oil	Tank No. 8
Kerosene Tank at C & R Shop	275	Kerosene	Tank No. 11
Gasoline Tank at Office Building	1,000	Gasoline	Tank No. 12
Lube Oil Tank at Secondary Crusher	300	Lube Oil	Tank No. 13
Recycled Oil	30,000	Recycled Oil	Tank No. 16
Recycled Oil	30,000	Recycled Oil	Tank No. 17
Petroleum Sulfonate (Conditioner) Tank at Float Plant	275	Conditioner	Tank No. 24
Two Propane Tanks at the electric shop 30,000 gallon each	60,000	Propane	Tank No. 25
Propane Tank at the Quarry	2,000	Propane	Tank No. 26
Propane Tank at #6 Oil Building	1,000	Propane	Tank No. 27
Two Propane Tanks at the C&R Shop	1,000	Propane	Tank No. 28
Sodium Hydroxide Tank	8,200	Sodium Hydroxide	Tank No. 29
Sulfuric Acid Tank	6,000	Sulfuric Acid	Tank No. 30
Floculent Tank	550	Floculent	Tank No. 31
Anti-foam Tank	2,500	Anti-foam	Tank No. 32
Promoter Tank	12,000	Promoter	Tank No. 33

## Emission Factors for Material Transfer, Screening, and Crushing

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Emission Sources	Emission Factors					
	PM (lb/ton)	Reference	PM <sub>10</sub> (lb/ton)	Reference	PM <sub>2.5</sub> (lb/ton)	Reference
Primary Crushing (Jaw) - Dry	0.0007	B	0.00033	B	0.00005	D
Primary Crushing (Jaw) - Wet Suppression	0.00021	B	0.0001	B	0.00002	D
Secondary Crushing (All) - Dry	0.00504	B	0.0024	B	0.00036	D
Secondary Crushing (All) - Wet Suppression	0.0012	B	0.00054	B	0.00008	D
Tertiary Crushing (All) - Dry	0.0054	A	0.0024	A	0.00036	D
Tertiary Crushing (All) - Wet Suppression	0.0012	A	0.00054	A	0.0001	A
Fines Crushing (All) - Dry	0.039	A	0.015	A	0.002271	D
Fines Crushing (All) - Wet Suppression	0.003	A	0.0012	A	0.00007	A
Screening (All) - Dry	0.025	A	0.0087	A	0.0013	D
Screening (All) - Wet Suppression	0.0022	A	0.00074	A	0.00005	A
Fines Screening (All) - Dry	0.3	A	0.072	A	0.011	D
Fines Screening (All) - Wet Suppression	0.0036	A	0.0022	A	0.00033	D
Conveyor Transfer - Dry	0.003	A	0.0011	A	0.00017	D
Conveyor Transfer - Wet Suppression	0.00014	A	0.000046	A	0.000013	A
Truck Unloading - Fragmented Stone	0.000034	B	0.000016	A	0.000002	D
Truck Loading - Crushed Stone	0.00021	B	0.0001	A	0.00002	D
Drilling	0.001	E	0.0008	E	0.00080	E
Clay Grinding and Screening (All) - Dry	8.5	C	0.53	C	0.080	D
Clay Grinding and Screening (All) - Wet Suppression	0.025	C	0.0023	C	0.00035	D

A. U.S. EPA, AP-42 Section 11.19.2 - Crushed Stone Processing and Pulverized Mineral Processing (August 2004), Table 11.19.2-2. Per footnote b, controlled sources (with wet suppression) are those that are part of the processing plant that employs current wet suppression technology similar to the study group. The moisture content of the study group without wet suppression systems operating (uncontrolled) ranged from 0.21 to 1.3 percent, and the same facilities operating wet suppression systems (controlled) ranged from 0.55 to 2.88 percent. Due to carry over of the small amount of moisture required, it has been shown that each source, with the exception of crushers, does not need to employ direct water sprays.

B. TCEQ Air Permits Division, Rock Crusher Emission Calculations spreadsheet, [https://www.tceq.texas.gov/permitting/air/guidance/newsource/rocks/nsr\\_fac\\_rock.html](https://www.tceq.texas.gov/permitting/air/guidance/newsource/rocks/nsr_fac_rock.html), Downloaded on January 5, 2015.

C. U.S. EPA, AP-42 Section 11.3 - Brick and Structural Clay Product Manufacturing (August 1997), Table 11.3-2.

D. PM<sub>2.5</sub> emission factor is calculated by dividing the PM<sub>10</sub> emission factor by the ratio of PM<sub>10</sub> to PM<sub>2.5</sub> particle size multipliers (k). The Particle size multipliers are from U.S. EPA, AP-42 Section 13.2.4 - Aggregate Handling and Storage Piles (November 2006), table following Equation 1.

k for PM <sub>10</sub>	0.35
k for PM <sub>2.5</sub>	0.053
Ratio of PM <sub>10</sub> to PM <sub>2.5</sub>	6.6

E. Mojave Desert Air Quality Management District (AQMD) Emissions Inventory Guidance, Mineral Handling and Processing Industries. April 10, 2000

## Emission Factors for Combustion

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Pollutants	Emission Factors (lb/1,000 gallon)		Emission Factors (lb/1,000 gallon)						Emission Factors (lb/10 <sup>6</sup> scf)	
	Propane	Reference	No. 2 Fuel Oil	Reference	No. 6 Fuel Oil	Reference	Recycled Oil	Reference	Natural Gas	Reference
NO <sub>x</sub>	19	I	20	I	55	I	19	I	100	J
CO	3.2	I	5	I	5	I	5	I	84	J
SO <sub>2</sub>	0.054	A, G	28.4	C	235.5	C	221	F	0.6	J
PM (con)	0.5	A	1.3	C	1.5	C	1.5	C	5.7	J
PM (filt)	0.2	A	2	C	17.005	C	0	F	1.9	J
PM <sub>10</sub> (filt)	0.2	A	1	C	14.70	C	0	F	1.9	J
PM <sub>2.5</sub> (filt)	0.2	A	0.25	C	9.57	C	0	F	1.9	J
CO <sub>2</sub>	12586.574	H	22454.256	H	24783.00	H	23117.6	H	120018.54	H
CH <sub>4</sub>	0.6006	H	0.9108	H	0.99	H	0.9372	H	2.26	H
N <sub>2</sub> O	0.12012	H	0.18216	H	0.198	H	0.18744	H	0.23	H
VOC	0.3	I	0.2	I	0.28	I	0.22	I	5.5	J
NH <sub>3</sub>	0.29	B	0.8	D	0.8	E	0.8	E	0.49	B
Lead	0	--	0.00126	C	0.0015	C	0.1015	F	0.0005	J

A. U.S. EPA, AP-42 Section 1.5 - Liquefied Petroleum Gas Combustion (July 2008), Table 1.5-1.

B. U.S. EPA, Factor Information Retrieval Data System (FIRE), <http://cfpub.epa.gov/webfire/index.cfm?action=fire.report>, Downloaded on January 9, 2015, SCC 10200602, uncontrolled. Assuming emission factor from Propane same as emission factor for Natural Gas.

C. U.S. EPA, AP-42 Section 1.3 - Fuel Oil Combustion (May 2010), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-5, 1.3-6, 1.3-10 and 1.3-11. Some SO<sub>2</sub> and particulate emission factors are calculated by multiplying emission factor by the sulfur and/or ash content in fuel. PM(con) emission factor for Recycled Oil is assumed to be the same as that for No. 6 Fuel Oil. Sample calculations are included below for representative factors that were calculated. Emission factors are assumed to be the same for distillates, No. 2 Fuel Oil, and diesel.

$$\text{Recycled Oil SO}_2 \text{ Factor (lb/1,000 gallon)} = \frac{147 \text{ lb}}{1,000 \text{ gallon}} \times 1.5 \% \text{ Sulfur} = 220.50 \text{ lb SO}_2 / 1,000 \text{ gallon}$$

D. U.S. EPA, Factor Information Retrieval Data System (FIRE), <http://cfpub.epa.gov/webfire/index.cfm?action=fire.report>, Downloaded on January 9, 2015, SCC 10200501, uncontrolled. Emission factors are assumed to be the same for distillates, No. 2 Fuel Oil, and diesel.

E. U.S. EPA, Factor Information Retrieval Data System (FIRE), <http://cfpub.epa.gov/webfire/index.cfm?action=fire.report>, Downloaded on January 9, 2015, SCC 10200401. Assuming emission factor for Recycled Oil to be same as No. 6 Fuel Oil.

F. U.S. EPA, AP-42 Section 1.11 - Waste Oil Combustion (October 1996), Tables 1.11-1, 1.11-2, and 1.11-3. Assumed lead content of fuel = 18.45 ppm from maximum measure lead content from provided fuel delivery chemical analyses.

G. Sulfur content estimate for propane from A National Methodology and Emission Inventory for Residential Fuel Consumption, <http://www.epa.gov/ttnchie1/conference/ei12/area/haneke.pdf>

H. 40 CFR Part 98, Subpart C, Tables C-1 and C-2. Heating value for recycled oil taken from US Silica records. Heating values for other fuels from default values in Table C-1.

I. Facility's Title V permit, Condition 4.4.2.

J. U.S. EPA, AP-42 Section 1.4 - Natural Gas Combustion (July 1998), Table 1.4-1 and 2.

### Emission Factors for Combustion

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

Pollutants	Natural Gas (lb/MMSCF)	Emission Factors (lb/1,000 gallon)		Emission Factors (lb/1,000 gallon)						Emission Factors (lb/10 <sup>6</sup> scf)	
		Propane	Reference	No. 2 Fuel Oil	Reference	No. 6 Fuel Oil	Reference	Recycled Oil	Reference	Natural Gas	Reference
Antimony	-	-	-	-	-	5.25E-03	B	4.50E-03	C	-	-
Arsenic	2.00E-04	1.78E-05	A	5.52E-04	B	1.32E-03	B	7.35E-03	D	2.00E-04	E
Beryllium	1.20E-05	1.07E-06	A	4.14E-04	B	2.78E-05	B	1.80E-03	C	1.20E-05	E
Cadmium	1.10E-03	9.81E-05	A	4.14E-04	B	3.98E-04	B	8.82E-03	D	1.10E-03	E
Chloride	-	-	-	-	-	3.47E-01	B	3.47E-01	B	-	-
Chromium	1.40E-03	1.25E-04	A	4.14E-04	B	8.45E-04	B	1.84E-02	D	1.40E-03	E
Cobalt	8.40E-05	7.49E-06	A	-	-	6.02E-03	B	5.70E-03	C	8.40E-05	E
Manganese	3.80E-04	3.39E-05	A	8.28E-04	B	3.00E-03	B	6.80E-02	C	3.80E-04	E
Mercury	2.60E-04	2.32E-05	-	4.14E-04	B	1.13E-04	B	-	-	2.60E-04	E
Nickel	2.10E-03	1.87E-04	A	4.14E-04	B	8.45E-02	B	1.60E-01	C	2.10E-03	E
Selenium	2.40E-05	2.14E-06	A	2.07E-03	B	6.83E-04	B	-	-	2.40E-05	E
Phosphorus	-	-	-	-	-	9.46E-03	B	3.60E-02	C	-	-
PCBs	-	-	-	-	-	-	-	7.35E-03	D	-	-
Phenol	-	-	-	-	-	-	-	2.40E-03	C	0.00E+00	-
Dichlorobenzene	1.20E-03	1.07E-04	A	-	-	-	-	8.00E-07	C	1.20E-03	-
Naphthalene	6.10E-04	5.44E-05	A	1.13E-03	B	1.13E-03	B	1.30E-02	C	6.10E-04	E
Phenanthrene	1.70E-05	1.52E-06	A	1.05E-05	B	1.05E-05	B	1.10E-02	C	1.70E-05	E
Dibutylphthalate	-	-	-	-	-	-	-	3.40E-05	C	-	-
Butylbenzylphthalate	-	-	-	-	-	-	-	5.10E-04	C	-	-
Bis(2-ethylhexyl)phthalate	-	-	-	-	-	-	-	2.20E-03	C	-	-
Pyrene	5.00E-06	4.46E-07	A	4.25E-06	B	4.25E-06	B	7.10E-03	C	5.00E-06	E
Benz(a)anthracene	1.80E-06	1.61E-07	A	4.01E-06	B	4.01E-06	B	4.00E-03	C	1.80E-06	E
Benzo(a)pyrene	1.20E-06	1.07E-07	A	-	-	-	-	4.00E-03	C	1.20E-06	E
Formaldehyde	7.50E-02	6.69E-03	A	6.10E-02	B	6.10E-02	B	-	-	7.50E-02	E
POM	-	-	-	3.30E-03	B	1.30E-03	B	-	-	-	-
Benzene	2.10E-03	1.87E-04	A	2.14E-04	B	2.14E-04	B	-	-	2.10E-03	E
Ethylbenzene	-	-	-	6.36E-05	B	6.36E-05	B	-	-	-	-
1,1,1-Trichloroethane	-	-	-	2.36E-04	B	2.36E-04	B	-	-	-	-
Toluene	3.40E-03	3.03E-04	A	6.20E-03	B	6.20E-03	B	-	-	3.40E-03	E
o-Xylene	-	-	-	1.09E-04	B	1.09E-04	B	-	-	-	-
Acenaphthene	1.80E-06	1.61E-07	A	2.11E-05	B	2.11E-05	B	-	-	1.80E-06	E
Acenaphthylene	1.80E-06	1.61E-07	A	2.53E-07	B	2.53E-07	B	-	-	1.80E-06	E
Anthracene	2.40E-06	2.14E-07	A	1.22E-06	B	1.22E-06	B	-	-	2.40E-06	E
Benzo(b,k)fluoranthene	-	-	-	1.48E-06	B	1.48E-06	B	-	-	-	-
Benzo(b)fluoranthene	1.80E-06	1.61E-07	A	-	-	-	-	-	-	1.80E-06	E
Benzo(k)fluoranthene	1.80E-06	1.61E-07	A	-	-	-	-	-	-	1.80E-06	E
Benzo(g,h,i)perylene	1.20E-06	1.07E-07	A	2.26E-06	B	2.26E-06	B	-	-	1.20E-06	E
Chrysene	1.80E-06	1.61E-07	A	2.38E-06	B	2.38E-06	B	-	-	1.80E-06	E
Dibenzo(a,h)anthracene	1.20E-06	1.07E-07	A	1.67E-06	B	1.67E-06	B	-	-	1.20E-06	E
Fluoranthene	3.00E-06	2.68E-07	A	4.84E-06	B	4.84E-06	B	-	-	3.00E-06	E
Fluorene	2.80E-06	2.50E-07	A	4.47E-06	B	4.47E-06	B	-	-	2.80E-06	E
Indeno(1,2,3-cd)pyrene	1.80E-06	1.61E-07	A	2.14E-06	B	2.14E-06	B	-	-	1.80E-06	E
Hexane	1.8	1.61E-01	A	-	-	-	-	-	-	1.80E+00	E
2-Methylnaphthalene <sup>B</sup>	2.40E-05	2.14E-06	A	-	-	-	-	-	-	2.40E-05	E
3-Methylchloranthrene <sup>B</sup>	1.80E-06	1.61E-07	A	-	-	-	-	-	-	1.80E-06	E
12- Dimethylbenz(a)anthracen	1.60E-05	1.43E-06	A	-	-	-	-	-	-	1.60E-05	E

A. U.S. EPA, AP-42 Section 1.4 - Natural Gas Combustion (July 1998), Tables 1.4-3 and 1.4-4. Propane emission factors determined by converting natural gas emission factors from a lb/MMSCF natural gas to a lb/1,000 gal propane basis.

B. U.S. EPA, AP-42 Section 1.3 - Fuel Oil Combustion (May 2010), Tables 1.3-8, 1.3-9, 1.3-10 and 1.3-11. Sample calculations are included below for representative factors that were calculated. Emission factors are assumed to be the same for distillates, No. 2 Fuel Oil, and diesel. When emission factors for No. 2 fuel oil were not available, assumed equal to emission factors for Residual Oil.

C. U.S. EPA, AP-42 Section 1.11 - Waste Oil Combustion (October 1996), Tables 1.11-4 and 1.11-5. Emission factors for Residual Fuel oil used in cases where emission factors for Waste Oil were not available.

D. Maximum value of pollutant concentration from monthly fuel delivery chemical analysis of Recycled Oil. Estimated emission factor based on conservative assumption that all of the pollutant in the fuel is emitted.

E. U.S. EPA, AP-42 Section 1.4 - Natural Gas Combustion (July 1998), Table 1.4-3 and 4.

## Control Factors

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Control Method <sup>A, B, C, D</sup>	Control Efficiency (%)	Control Factor (1 - Control Efficiency)
None	0%	1
Partial Enclosure (skirt)	85%	0.15
Full Enclosure (boot)	90%	0.1
Enclosed by Building	90%	0.1
Wet Material	50%	0.5
Water Spray	70%	0.3
Chemicals/Foam	80%	0.2
Washed Sand/Gravel	95%	0.05
Washed Sand/Gravel With Water Spray	98.5%	0.015
Saturated Material (No Visible Emissions)	99%	0.01
Fabric Filter - Partial Enclosure	89.9%	0.1009
Fabric Filter - No Enclosure	74.9%	0.25075
Wet Scrubber	80%	0.2
Fabric Filter	99.9%	0.001

A. Control efficiency for all control methods except saturated material and fabric filters from TCEQ Air Permits Division, Rock Crusher Emission Calculations spreadsheet, [https://www.tceq.texas.gov/permitting/air/guidance/newsourcereview/rocks/nsr\\_fac\\_rock.html](https://www.tceq.texas.gov/permitting/air/guidance/newsourcereview/rocks/nsr_fac_rock.html), Downloaded on January 5, 2015.

- Wet control methods (i.e., water, chemicals, saturated material, etc.) are to be applied to dry control factors.

B. Control efficiency for saturated material from TCEQ Air Permits Division, Rock Crushing Plants, Draft RG 058 (February 2002), Table 7, in a note that states "A 99% control efficiency may be allowed when a facility (emission point) operates under saturated conditions with no visible emissions."

C. Control efficiency for fabric filters from typical expected efficiency.

D. Efficiencies for fabric filter controls with partial enclosures and no enclosures and wet scrubber from engineering estimates of expected capture efficiencies.

## Emission Factors for Tanks

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Pollutants	Emission Factors (lb/gallon)
	Tank
Benzene	8.47E-07
Ethylbenzene	1.21E-06
n-Hexane	1.73E-07
Toluene	9.56E-06
VOC	3.03E-05

A. Based on TankESP run assuming generic tank attributes.







## Baghouse Emissions

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Title V ID	Source Description	Process Unit Description	Flowrate (dscfm)	Outlet Grain Loading (gr/dscf)	Annual Hours of Operation (hrs/year)	Emission Rate (tpy) <sup>A,B,C</sup>		
						PM	PM <sub>10</sub>	PM <sub>2.5</sub>
Fluid Bed Dryer & Rotary Dryer	Fluid Bed Dryer & Rotary Dryer	Fluid Bed Dryer & Rotary Dryer	--	--	--	95.4800	95.4800	76.3840
Screening and Unground Sanding	Screening and Unground Sanding Processing CF#40	Screening and Unground Sanding Processing CF#40	5,500	0.014	8,760	2.8908	2.8908	2.3126
Screening and Unground Sanding	Screening and Unground Sanding Processing CF#6	Screening and Unground Sanding Processing CF#6	20,000	0.014	8,760	10.5120	10.5120	8.4096
<b>Total</b>						<b>108.8828</b>	<b>108.8828</b>	<b>87.1062</b>

A. Fluid Bed Dryer & Rotary Dryer Emissions based on combined TVOP Limit.

B.  $PM_{10}/PM_{2.5}$  Emission Rate (tpy) = Flowrate (acfm) \* Outlet Grain Loading (gr/scf) \* (1 lb / 7,000 gr) \* (1 ton / 2,000 lb) \* Annual Hours of Operation (hrs/year) \* (60 min / 1 hr)

Source Description Screening and Unground Sanding Processing	5,500 acfm	0.01 gr/dscf	1 lb/7,000 gr	1 ton/2,000 lb	8,760 hrs/year	60 min/1 hr	=	2.8908 tpy
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C. Assuming PM<sub>2.5</sub> emissions are 80% of PM<sub>10</sub> emissions.

## Stockpile Emissions

### Material Storage Pile Wind Erosion Annual Emissions

Title V ID	Size (acres)	Emission Control Method	Control Efficiency	Days in Reporting Period	Emission Factor <sup>A</sup>			Unit	Emission Rate (tpy)		
					PM	PM <sub>10</sub>	PM <sub>2.5</sub>		PM	PM <sub>10</sub>	PM <sub>2.5</sub>
Golf Sand Stockpile & Float Sand Stockpile	5.63	None	0%	365	698.14	349.07	52.36	lb/acre	1.97	0.98	0.15
Reclaim Stockpile	1.386	Partial Enclosure (skirt)	0%	365	698.14	349.07	52.36	lb/acre	0.48	0.24	0.04
<b>Total Stockpile Erosion Emissions</b>									<b>2.45</b>	<b>1.22</b>	<b>0.18</b>

A. USEPA, 1992 (Fugitive Dust Background and Technical Information Document for Best Available Control Measures, Section 2.3.1.3.3, Wind Emissions from Continuously Active Piles). USEPA, 2006 13.2.5 for k factor:

EF (lb/day/acre) = k x 1.7 x (s/1.5) x ((365 - p)/235) x (f/15)\*(1-% Control Efficiency)

B. Total PM assumed to be equal to PM < 30 μm

C. Total days of precipitation greater than or equal to 0.01 inch from U.S. EPA, AP-42 Section 13.2.2 - Unpaved Roads (November 2006), Figure 13.2.2-1

Days of precipitation greater than or equal to 0.01 inch (p)	102
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D. Time (%) that unobstructed wind speed exceeds 5.4 m/s at mean pile height from climatological data at Hagerstown, MD from 2012-2014

Time (%) that unobstructed wind speed exceeds 5.4 m/s at mean pile height (f)	7.8
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E. Silt content from U.S. EPA, AP-42 Section 13.2.4 - Aggregate Handling and Storage Piles (November 2006), Table 12.2.4-1:

Silt Content (%), (s)	2.9
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F. Particle Size multiplier from U.S. EPA, AP-42 Section 13.2.5 - Industrial Wind Erosion (November 2006), Table after Equation 2

Particle Size multiplier (k)  
 1 (for PM < 30 μm)  
 0.5 (for PM < 10 μm)  
 0.075 (for PM < 2.5 μm)

## Blasting Emissions

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Emission Factor (lb/blast)		
PM	PM <sub>10</sub>	PM <sub>2.5</sub>
6.47	3.3654	0.1942

Title V ID	Area Removed per Blast	Number of Blasts per Year	Control Method	Control Factor <sup>A</sup>	PM Emission Factor (lb/blast) <sup>B</sup>	Emission Rate (tpy) <sup>C, D</sup>		
						PM	PM <sub>10</sub>	PM <sub>2.5</sub>
Quarry	5978.823529	51	None	1	6.47	0.1650	0.0858	0.0050
<b>Total</b>						<b>0.1650</b>	<b>0.0858</b>	<b>0.0050</b>

A. Control factors from *Control Factors* table.

B. U.S. EPA, AP-42 Section 11.9 Western Surface Coal Mining (October 1998), Table 11.9-1.

C. PM Emission Rate (tpy) = (PM Emission Factor (lbs PM per blast))\*(Number of blasts per year)\*(1 ton/2,000 lbs.)

$$\text{Quarry PM emission Rate (tpy)} = \frac{6.472 \text{ lb PM}}{\text{blast}} \times 51.0 \text{ blasts} \times 1 \times \frac{1 \text{ ton}}{2,000 \text{ lb}} = 0.165 \text{ tpy}$$

D. PM10 and PM2.5 emissions estimated using scaling factors from U.S. EPA, AP-42 Section 11.9 Western Surface Coal Mining (October 1998), Table 11.9-1.

Scaling factor for PM <sub>10</sub>	0.52
Scaling factor for PM <sub>2.5</sub>	0.03

## Unpaved Roads Emissions

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

### Mean Vehicle Weight

Vehicle Type	Product Handled	Weight Empty (tons)	Weight Full (tons)	Mean Vehicle Weight <sup>A</sup> (tons)
Haul Trucks/Trucks	Quarried material	68	157.5	112.75

A. Mean Vehicle Weight (tons) = (Weight Full (tons) - Weight Empty (tons))/2

### Vehicle Mile Traveled

Emission Unit ID	Source Description	Trip Description	Vehicle Type	Product Handled	Annual Throughput (tons/year)	Roundtrip Length (miles/trip)	Number of Trips <sup>A</sup> (trips/year)	Vehicle Mile Traveled <sup>B</sup> (VMT/year)
Roads	Facility Roadways	Unpaved Haul Roads	Haul Trucks/Trucks	Quarried material	8,760,000	2.00	77,694	155,388
Roads	Facility Roadways	Unpaved Plant Traffic	Haul Trucks/Trucks	Quarried material	8,760,000	1.00	77,694	77,694
Roads	Facility Roadways - Limestone	Unpaved Plant Traffic	Haul Trucks/Trucks	Quarried material	4,380,000	0.40	38,847	15,539

A. Number of Trips (trips/year) = Annual Throughput (tons/year) / (Mean Vehicle Weight (tons))

$$\text{Unpaved Haul Roads Number of Trips (trips/year)} = \frac{8,760,000 \text{ tons}}{\text{year}} \div \frac{1}{112.75 \text{ tons}} = 77,694 \text{ trips/year}$$

B. Vehicle Mile Traveled (VMT/year) = Roundtrip Length (miles/trip) \* Number of Trips (trips/year)

$$\text{Unpaved Haul Roads Vehicle Mile Traveled (VMT/year)} = \frac{2.00 \text{ miles}}{\text{trip}} \times \frac{77,694 \text{ trips}}{\text{year}} = 155,388 \text{ VMT/year}$$

## Unpaved Roads Emissions

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

### Emission Calculations

Emission Unit ID	Source Description	Trip Description	Emission Factor <sup>A</sup> (lb/VMT)			Emission Rate <sup>B</sup> (tpy)		
			PM	PM <sub>10</sub>	PM <sub>2.5</sub>	PM	PM <sub>10</sub>	PM <sub>2.5</sub>
Roads	Facility Roadways	Unpaved Haul Roads	8.89	2.27	0.23	207.2703	52.8256	5.2826
Roads	Facility Roadways	Unpaved Plant Traffic	8.89	2.27	0.23	103.6351	26.4128	2.6413
Roads	Facility Roadways - Limestone	Unpaved Plant Traffic	8.89	2.27	0.23	20.7270	5.2826	0.5283
<b>Total</b>						<b>331.6324</b>	<b>84.5209</b>	<b>8.4521</b>

A. U.S. EPA, AP-42 Section 13.2.2 - Unpaved Roads (November 2006), Equations 1a and 2.

Emission Factor (lb/VMT) = (Particle Size Multiplier (lb/VMT) \* (Surface Material Silt Content (%) / 12)<sup>a</sup> \* (Mean Vehicle Weight (tons) / 3)<sup>b</sup>) \* ((365 - P)/365)

$$\text{Source Description Facility Roadways PM Emission Factor (lb/VMT)} = \frac{4.9 \text{ lb}}{\text{VMT}} \left( \frac{4.8 / 100}{12} \right)^{0.7} * \left( \frac{112.75}{3} \right)^{0.45} * \frac{(365 - 119)}{365} = 8.89 \text{ lb/VMT}$$

Parameter	Value	Reference
PM Particle Size Multiplier (lb/VMT)	4.9	U.S. EPA, AP-42 Section 13.2.2 - Unpaved Roads (November 2006), Table 13.2.2-2.
PM <sub>10</sub> Particle Size Multiplier (lb /VMT)	1.5	
PM <sub>2.5</sub> Particle Size Multiplier (lb/VMT)	0.15	
PM Empirical Constant a	0.7	
PM <sub>10</sub> Empirical Constant a	0.9	
PM <sub>2.5</sub> Empirical Constant a	0.9	
PM Empirical Constant b	0.45	
PM <sub>10</sub> Empirical Constant b	0.45	
PM <sub>2.5</sub> Empirical Constant b	0.45	
Surface Material Silt Content (%)	4.8	
P (Number of days with ≥ 0.01" precipitation in a year)	119	U.S. EPA, AP-42 Section 13.2.2 - Unpaved Roads (November 2006), Figure 13.2.2-1.
Control Factor	0.3	Water Spray

B. Emission Rate (tpy) = Emission Factor (lb/VMT) \* Vehicle Mile Traveled (VMT/year) \* (1 ton / 2,000 lb) \* (Control Factor)

$$\text{Source Description Facility Roadways PM Emission Rate (tpy)} = \frac{8.89 \text{ lb}}{\text{VMT}} \left| \frac{77,694 \text{ VMT}}{\text{year}} \right| \left| \frac{1 \text{ ton}}{2,000 \text{ lb}} \right| \left| 0.3 \right| = 207.2703 \text{ tpy}$$

## Permitted Limit Emissions

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Emission Unit ID	Emission Factor			Input Data		Emission
	Value	Units	Pollutant	Value	Units	Rate (tpy) <sup>A</sup>
Material Transfer/Conveying	1.00	lb/hr	PM	8,760	hrs/year	4.3800
Material Transfer/Conveying	1.00	lb/hr	PM10	8,760	hrs/year	4.3800
Material Transfer/Conveying	0.80	lb/hr	PM2.5	8,760	hrs/year	3.5040
Screening	0.69	lb/hr	PM	8,760	hrs/year	3.0003
Screening	0.69	lb/hr	PM10	8,760	hrs/year	3.0003
Screening	0.55	lb/hr	PM2.5	8,760	hrs/year	2.4002
Bulk Load and BFS Bagger	0.69	lb/hr	PM	8,760	hrs/year	3.0003
Bulk Load and BFS Bagger	0.69	lb/hr	PM10	8,760	hrs/year	3.0003
Bulk Load and BFS Bagger	0.55	lb/hr	PM2.5	8,760	hrs/year	2.4002
Bulk Bagger	0.10	lb/hr	PM	8,760	hrs/year	0.4380
Bulk Bagger	0.10	lb/hr	PM10	8,760	hrs/year	0.4380
Bulk Bagger	0.08	lb/hr	PM2.5	8,760	hrs/year	0.3504
#6 Silo	0.05	lb/hr	PM	8,760	hrs/year	0.2190
#6 Silo	0.05	lb/hr	PM10	8,760	hrs/year	0.2190
#6 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year	0.1752
#7/#8 Silo	0.70	lb/hr	PM	8,760	hrs/year	3.0660
#7/#8 Silo	0.70	lb/hr	PM10	8,760	hrs/year	3.0660
#7/#8 Silo	0.56	lb/hr	PM2.5	8,760	hrs/year	2.4528
#5 Silo	0.05	lb/hr	PM	8,760	hrs/year	0.2190
#5 Silo	0.05	lb/hr	PM10	8,760	hrs/year	0.2190
#5 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year	0.1752
#4 Silo	0.05	lb/hr	PM	8,760	hrs/year	0.2190
#4 Silo	0.05	lb/hr	PM10	8,760	hrs/year	0.2190
#4 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year	0.1752
#3 Silo	0.05	lb/hr	PM	8,760	hrs/year	0.2190
#3 Silo	0.05	lb/hr	PM10	8,760	hrs/year	0.2190
#3 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year	0.1752
#2 Silo	0.05	lb/hr	PM	8,760	hrs/year	0.2190
#2 Silo	0.05	lb/hr	PM10	8,760	hrs/year	0.2190
#2 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year	0.1752
#1 Silo	0.05	lb/hr	PM	8,760	hrs/year	0.2190
#1 Silo	0.05	lb/hr	PM10	8,760	hrs/year	0.2190
#1 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year	0.1752

A. Emission Rate (tpy) = Emission Factor (lb/hr) \* Input Data (hrs/year) \* (1 ton / 2,000 lb)

$$\text{Material Transfer/Conveying PM Emission Rate (tpy)} = \frac{1.00 \text{ lb/hr PM} \times 8,760 \text{ hrs/year}}{2,000 \text{ lb}} = 4.38 \text{ tpy}$$



### Combustion Emissions (Total)

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Emission Unit	Source Description	Process Unit Description	Fuel Used	Fuel Throughput		Emission Factor <sup>A,C</sup>													Value	
				Value	Unit	PM (filt)	PM <sub>1.0</sub> (filt)	PM <sub>2.5</sub> (filt)	PM (con)	NO <sub>x</sub>	CO	SO <sub>2</sub>	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	VOC	NH <sub>3</sub>	Lead		
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	4,146.40	1,000 gal/year	17.005	14.6985	9.5735	1.5	55	5	235.5	24783	0.99	0.198	0.28	0.8	0.0015	lb/1,000 gal	
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	4,146.40	1,000 gal/year	0	0	0	1.5	19	5	220.5	23117.6	0.9372	0.18744	0.22	0.8	0.10148	lb/1,000 gal	
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	6,797.38	1,000 gal/year	0.2	0.2	0.2	0.5	19	3.2	0.054	12586.57	0.6006	0.12012	0.3	0.285	0	lb/1,000 gal	
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	4,442.57	1,000 gal/year	2	1	0.25	1.3	20	5	28.4	22454.26	0.9108	0.18216	0.2	0.8	0.00126	lb/1,000 gal	
Dryer #1	Dry Sand Processing	Fluid Bed Dryer - Natural Gas Combustion	Natural Gas	609.76	million scf/year	1.9	1.9	1.9	5.7	100	84	0.6	120018.5	2.26194	0.22619	5.5	0.49	0.0005	lb/million scf	
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	1,637.11	1,000 gal/year	0.2	0.2	0.2	0.5	19	3.2	0.054	12586.57	0.6006	0.12012	0.3	0.285	0	lb/1,000 gal	
<b>Fluid Bed Dryer Total</b>																				
<b>Fluid Rotary Dryer Total</b>																				

A. Emission factors from *Emission Factors for Combustion* table for each source.

B. Emission Rate (tpy) = Emission Factor (lb/1,000 gal) \* Fuel Throughput (1,000 gal/year) \* (1 ton / 2,000 lb)

Process Unit Description Fluid Bed Dryer - Propane Combustion NOx Emission Rate

$$\text{(tpy)} = \frac{19 \text{ lb/1,000 gal} \times 6,797.38 \text{ 1,000 gal/year}}{2,000 \text{ lb}} = 64.5751 \text{ tpy}$$

C. PM, PM<sub>1.0</sub> and PM<sub>2.5</sub> emissions from recycled oil combustion on the Fluid Bed Dryer and propane combustion on the Rotary Dryer have been conservatively accounted for in calculations from stack testing done in December, 2012. (See Baghouse tab).

## Combustion Emissions (Total)

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Emission Unit	Source Description	Process Unit Description	Fuel Used	Fuel Throughput		Emission Rate (tpy) <sup>b</sup>												
				Value	Unit	PM (filt)	PM <sub>10</sub> (filt)	PM <sub>2.5</sub> (filt)	PM (con)	NO <sub>x</sub>	CO	SO <sub>2</sub>	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	VOC	NH <sub>3</sub>	Lead
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	4,146.40	1,000 gal/year	35.25	30.47	19.85	3.11	114.03	10.37	488.24	51380.12	2.05	0.41	0.58	1.66	0.00
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	4,146.40	1,000 gal/year	0.00	0.00	0.00	3.11	39.39	10.37	457.14	47927.41	1.94	0.39	0.46	1.66	0.21
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	6,797.38	1,000 gal/year	0.68	0.68	0.68	1.70	64.58	10.88	0.18	42777.84	2.04	0.41	1.02	0.97	0.00
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	4,442.57	1,000 gal/year	4.44	2.22	0.56	2.89	44.43	11.11	63.08	49877.32	2.02	0.40	0.44	1.78	0.00
Dryer #1	Dry Sand Processing	Fluid Bed Dryer - Natural Gas Combustion	Natural Gas	609.76	million scf/year	0.58	0.58	0.58	1.74	30.49	25.61	0.18	36591.54	0.69	0.07	1.68	0.15	0.00
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	1,637.11	1,000 gal/year	0.16	0.16	0.16	0.41	15.55	2.62	0.04	10302.83	0.49	0.10	0.25	0.23	0.00
<b>Fluid Bed Dryer Total</b>						<b>35.25</b>	<b>30.47</b>	<b>19.85</b>	<b>3.11</b>	<b>114.03</b>	<b>25.61</b>	<b>488.24</b>	<b>51380.12</b>	<b>2.05</b>	<b>0.41</b>	<b>1.68</b>	<b>1.78</b>	<b>0.21</b>
<b>Fluid Rotary Dryer Total</b>						<b>0.16</b>	<b>0.16</b>	<b>0.16</b>	<b>0.41</b>	<b>15.55</b>	<b>2.62</b>	<b>0.04</b>	<b>10302.83</b>	<b>0.49</b>	<b>0.10</b>	<b>0.25</b>	<b>0.23</b>	<b>0.00</b>

A. Emission factors from *Emission Factors for Combustion* table for each source.

B. Emission Rate (tpy) = Emission Factor (lb/1,000 gal) \* Fuel Throughput (1,000 gal/year) \* (1 ton / 2,000 lb)

Process Unit Description Fluid Bed Dryer - Propane Combustion NOx Emission Rate (tpy) =	19 lb/1,000 gal	6,797.38 1,000 gal/year	1 ton 2,000 lb
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C. PM, PM<sub>10</sub> and PM<sub>2.5</sub> emissions from recycled oil combustion on the Fluid Bed Dryer and propane combustion on the Rotary Dryer have be

**Combustion Emissions (Total)**

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

Emission Unit	Source Description	Process Unit Description	Fuel Used	Fuel Throughput		Emission Factor <sup>A</sup>													
				Value	Unit	Antimony	Arsenic	Beryllium	Cadmium	Chloride	Chromium	Cobalt	Manganese	Mercury	Nickel	Selenium	Phosphorus	PCBs	Phenol
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	4,146.40	1,000 gal/year	5.25E-03	1.32E-03	2.78E-05	3.98E-04	3.47E-01	8.45E-04	6.02E-03	3.00E-03	1.13E-04	8.45E-02	6.83E-04	9.46E-03	-	-
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	4,146.40	1,000 gal/year	4.50E-03	7.35E-03	1.80E-03	8.82E-03	3.47E-01	1.84E-02	5.70E-03	6.80E-02	-	1.60E-01	-	3.60E-02	7.35E-03	2.40E-03
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	6,797.38	1,000 gal/year	-	1.78E-05	1.07E-06	9.81E-05	-	1.25E-04	7.49E-06	3.39E-05	2.32E-05	1.87E-04	2.14E-06	-	-	-
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	4,442.57	1,000 gal/year	-	5.52E-04	4.14E-04	4.14E-04	-	4.14E-04	-	8.28E-04	4.14E-04	4.14E-04	2.07E-03	-	-	-
Dryer #1	Wet Processing Plant	Fluid Bed Dryer- Natural Gas Combustion	Natural Gas	609.76	million scf/year	2.00E-04	1.20E-05	1.10E-03	-	1.40E-03	8.40E-05	3.80E-04	2.60E-04	2.10E-03	2.40E-05	-	-	-	0.00E+00
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	1,637.11	1,000 gal/year	-	1.78E-05	1.07E-06	9.81E-05	-	1.25E-04	7.49E-06	3.39E-05	2.32E-05	1.87E-04	2.14E-06	-	-	-

Emission Unit	Source Description	Process Unit Description	Fuel Used	Fuel Throughput		Emission Rate (tpy) <sup>B</sup>													
				Value	Unit	Antimony	Arsenic	Beryllium	Cadmium	Chloride	Chromium	Cobalt	Manganese	Mercury	Nickel	Selenium	Phosphorus	PCBs	Phenol
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	4,146.40	1,000 gal/year	0.0109	0.0027	0.0001	0.0008	0.7194	0.0018	0.0125	0.0062	0.0002	0.1752	0.0014	0.0196		
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	4,146.40	1,000 gal/year	0.0093	0.0152	0.0037	0.0183	0.7194	0.0382	0.0118	0.1410		0.3317		0.0746	0.0152	0.0050
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	6,797.38	1,000 gal/year		0.0001	0.0000	0.0003		0.0004	0.0000	0.0001	0.0001	0.0006	0.0000			
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	4,442.57	1,000 gal/year		0.0012	0.0009	0.0009		0.0009		0.0018	0.0009	0.0009	0.0046			
Dryer #1	Wet Processing Plant	Fluid Bed Dryer- Natural Gas Combustion	Natural Gas	609.76	million scf/year		0.0001	0.0000	0.0003		0.0004	0.0000	0.0001	0.0001	0.0006	0.0000			0.0000
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	1,637.11	1,000 gal/year		0.0000	0.0000	0.0001		0.0001	0.0000	0.0000	0.0000	0.0002	0.0000			
<b>Fluid Bed Dryer Total</b>						<b>0.0109</b>	<b>0.0152</b>	<b>0.0037</b>	<b>0.0183</b>	<b>0.7194</b>	<b>0.0382</b>	<b>0.0125</b>	<b>0.1410</b>	<b>0.0009</b>	<b>0.3317</b>	<b>0.0046</b>	<b>0.0746</b>	<b>0.0152</b>	<b>0.0049</b>
<b>Fluid Rotary Dryer Total</b>							<b>0.0000</b>	<b>0.0000</b>	<b>0.0001</b>		<b>0.0001</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0002</b>	<b>0.0000</b>			

A. Emission factors from *Emission Factors for Combustion* table for each source.

B. Emission Rate (tpy) = Emission Factor (lb/1,000 gal) \* Fuel Throughput (1,000 gal/year) \* (1 ton / 2,000 lb)

Process Unit Description Fluid Bed Dryer - Recycled Oil Combustion Antimony  
Emission Rate (tpy) =  $\frac{0.0045 \text{ lb/1,000 gal}}{4,146.4 \text{ 1,000 gal/year}} \times \frac{1 \text{ ton}}{2,000 \text{ lb}} = 0.0093 \text{ tpy}$

**Combustion Emissions (Total)**

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

Emission Unit	Source Description	Process Unit Description	Fuel Used	Emissions (lb/1,000 gal)												
				Dichlorobenzene	Naphthalene	Phenanthrene	Dibutylphthalate	Butylbenzylphthalate	Bis(2-ethylhexyl)phthalate	Pyrene	Benz(a)anthracene	Benzo(a)pyrene	Formaldehyde	POM	Benzene	Ethylbenzene
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	-	1.13E-03	1.05E-05	-	-	-	4.25E-06	4.01E-06	-	6.10E-02	1.30E-03	2.14E-04	6.36E-05
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	8.00E-07	1.30E-02	1.10E-02	3.40E-05	5.10E-04	2.20E-03	7.10E-03	4.00E-03	4.00E-03	-	-	-	-
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	1.07E-04	5.44E-05	1.52E-06	-	-	-	4.46E-07	1.61E-07	1.07E-07	6.69E-03	-	1.87E-04	-
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	-	1.13E-03	1.05E-05	-	-	-	4.25E-06	4.01E-06	-	6.10E-02	3.30E-03	2.14E-04	6.36E-05
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Natural Gas Combustion	Natural Gas	1.20E-03	6.10E-04	1.70E-05	-	-	-	5.00E-06	1.80E-06	1.20E-06	7.50E-02	-	2.10E-03	-
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	1.07E-04	5.44E-05	1.52E-06	-	-	-	4.46E-07	1.61E-07	1.07E-07	6.69E-03	-	1.87E-04	-

Emission Unit	Source Description	Process Unit Description	Fuel Used	Emissions (lb/1,000 gal)												
				Dichlorobenzene	Naphthalene	Phenanthrene	Dibutylphthalate	Butylbenzylphthalate	Bis(2-ethylhexyl)phthalate	Pyrene	Benz(a)anthracene	Benzo(a)pyrene	Formaldehyde	POM	Benzene	Ethylbenzene
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil		0.0023	0.0000				0.0000	0.0000		0.1265	0.0027	0.0004	0.0001
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	0.0000	0.0270	0.0228	0.0001	0.0011	0.0046	0.0147	0.0083	0.0083				
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	0.0004	0.0002	0.0000				0.0000	0.0000	0.0000	0.0227		0.0006	
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil		0.0025	0.0000				0.0000	0.0000		0.1355	0.0073	0.0005	0.0001
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Natural Gas Combustion	Natural Gas	0.0004	0.0002	0.0000				0.0000	0.0000	0.0000	0.0229		0.0006	
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	0.0001	0.0000	0.0000				0.0000	0.0000	0.0000	0.0055		0.0002	
				<b>0.00037</b>	<b>0.02695</b>	<b>0.02281</b>	<b>0.00007</b>	<b>0.00106</b>	<b>0.00456</b>	<b>0.01472</b>	<b>0.00829</b>	<b>0.00829</b>	<b>0.13550</b>	<b>0.00733</b>	<b>0.00064</b>	<b>0.00014</b>
				<b>0.00009</b>	<b>0.00004</b>	<b>0.00000</b>				<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.00548</b>		<b>0.00015</b>	

A. Emission factors from *Emission Factors for Combustion* table for each source.  
 B. Emission Rate (tpy) = Emission Factor (lb/1,000 gal) \* Fuel Throughput (1,000 gal/year) \* (1 t / 2,204.62 lb)  
 Process Unit Description Fluid Bed Dryer - Recycled Oil Combustion Antimony  
 Emission Rate (tpy) =  $\frac{0.0045 \text{ lb/1,000 gal}}{2,204.62 \text{ lb/t}}$

**Combustion Emissions (Total)**

Company Name: U.S. Silica  
 Site Name: Berkeley Springs Plant  
 Project: Potential to Emit Calculations

Emission Unit	Source Description	Process Unit Description	Fuel Used	1,1,1-Trichloroethane	Toluene	o-Xylene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(b,k)fluoranthene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	2.36E-04	6.20E-03	1.09E-04	2.11E-05	2.53E-07	1.22E-06	1.48E-06	-	-	2.26E-06	2.38E-06
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	-	-	-	-	-	-	-	-	-	-	-
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	-	3.03E-04	-	1.61E-07	1.61E-07	2.14E-07	-	1.61E-07	1.61E-07	1.07E-07	1.61E-07
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	2.36E-04	6.20E-03	1.09E-04	2.11E-05	2.53E-07	1.22E-06	1.48E-06	-	-	2.26E-06	2.38E-06
Dryer #1	Wet Processing Plant	Fluid Bed Dryer- Natural Gas Combustion	Natural Gas	-	3.40E-03	-	1.80E-06	1.80E-06	2.40E-06	-	1.80E-06	1.80E-06	1.20E-06	1.80E-06
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	-	3.03E-04	-	1.61E-07	1.61E-07	2.14E-07	-	1.61E-07	1.61E-07	1.07E-07	1.61E-07

Emission Unit	Source Description	Process Unit Description	Fuel Used	1,1,1-Trichloroethane	Toluene	o-Xylene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(b,k)fluoranthene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	0.0005	0.0129	0.0002	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil											
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane		0.0010		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	0.0005	0.0138	0.0002	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000
Dryer #1	Wet Processing Plant	Fluid Bed Dryer- Natural Gas Combustion	Natural Gas		0.0010		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane		0.0002		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000
				<b>0.00052</b>	<b>0.01377</b>	<b>0.00024</b>	<b>0.00005</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.00001</b>	<b>0.00001</b>
					<b>0.00025</b>		<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>		<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>

A. Emission factors from *Emission Factors for Combustion* table for each source.  
 B. Emission Rate (tpy) = Emission Factor (lb/1,000 gal) \* Fuel Throughput (1,000 gal/year) \* (1 t / 2,204.62 lb)  
 Process Unit Description Fluid Bed Dryer - Recycled Oil Combustion Antimony  
 Emission Rate (tpy) =  $\frac{0.0045 \text{ lb/1,000 gal}}{2,204.62} \times 1,000 \text{ gal/year} \times 1 \text{ t/2,204.62 lb}$

**Combustion Emissions (Total)**

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

Emission Unit	Source Description	Process Unit Description	Fuel Used	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Hexane	2-Methylnaphthalene <sup>B</sup>	3-Methylchloranthrene <sup>B</sup>	7,12- Dimethylbenz(a)anthracene <sup>B</sup>	Units
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	1.67E-06	4.84E-06	4.47E-06	2.14E-06	-	-	-	-	lb/1,000 gal
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	-	-	-	-	-	-	-	-	lb/1,000 gal
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	1.07E-07	2.68E-07	2.50E-07	1.61E-07	1.61E-01	2.14E-06	1.61E-07	1.43E-06	lb/1,000 gal
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	1.67E-06	4.84E-06	4.47E-06	2.14E-06	-	-	-	-	lb/1,000 gal
Dryer #1	Wet Processing Plant	Fluid Bed Dryer- Natural Gas Combustion	Natural Gas	1.20E-06	3.00E-06	2.80E-06	1.80E-06	1.80E+00	2.40E-05	1.80E-06	1.60E-05	lb/million scf
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	1.07E-07	2.68E-07	2.50E-07	1.61E-07	1.61E-01	2.14E-06	1.61E-07	1.43E-06	lb/1,000 gal

Emission Unit	Source Description	Process Unit Description	Fuel Used	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Hexane	2-Methylnaphthalene <sup>B</sup>	3-Methylchloranthrene <sup>B</sup>	7,12- Dimethylbenz(a)anthracene <sup>B</sup>
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	0.0000	0.0000	0.0000	0.0000				
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil								
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	0.0000	0.0000	0.0000	0.0000	0.5458	0.0000	0.0000	0.0000
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	0.0000	0.0000	0.0000	0.0000				
Dryer #1	Wet Processing Plant	Fluid Bed Dryer- Natural Gas Combustion	Natural Gas	0.0000	0.0000	0.0000	0.0000	0.5488	0.0000	0.0000	0.0000
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	0.0000	0.0000	0.0000	0.0000	0.1315	0.0000	0.0000	0.0000
				<b>0.00000</b>	<b>0.00001</b>	<b>0.00001</b>	<b>0.00000</b>	<b>0.54879</b>	<b>0.00001</b>	<b>0.00000</b>	<b>0.00000</b>
				<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.13145</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>

A. Emission factors from *Emission Factors for Combustion* table for each source.  
 B. Emission Rate (tpy) = Emission Factor (lb/1,000 gal) \* Fuel Throughput (1,000 gal/year) \* (1 t / 2,204.62 lb)  
 Process Unit Description Fluid Bed Dryer - Recycled Oil Combustion Antimony  
 Emission Rate (tpy) =  $\frac{0.0045 \text{ lb/1,000 gal}}{2,204.62}$

### Limestone Emissions (Total)

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

Title V ID	Description	EP ID	Emissions <sup>A</sup>					
			Uncontrolled					
			PM		PM-10		PM-2.5	
LB/HR	TPY	LB/HR	TPY	LB/HR	TPY			
STOCK1	Stockpile	FP01	0.007	0.029	0.003	0.014	0.000	0.002
CRUSH1	Primary Crusher	E02	1.100	4.818	0.370	1.621	0.000	0.000
CRUSH2	Secondary cone crusher	E04	1.100	4.818	0.370	1.621	0.000	0.000
SCREN1	scalping screener	E01	1.100	4.818	0.370	1.621	0.000	0.000
SCREN2	screener	E03	1.100	4.818	0.370	1.621	0.000	0.000
SCREN3	screener	E05	1.100	4.818	0.370	1.621	0.000	0.000
TRUCK1	Front end loader feeding scalping screen	TP01	0.008	0.035	0.008	0.035	0.008	0.035
FEEDER1	Screen feeding crusher	TP02	0.070	0.307	0.023	0.101	0.007	0.028
CRUSH1	Crusher onto belt conveyor	TP03	0.070	0.307	0.023	0.101	0.007	0.028
SCREN1	Belt conveyor feeding screener	TP04	0.070	0.307	0.023	0.101	0.007	0.028
SCRENBC1	Conveyor from Screener	TP05	0.070	0.307	0.023	0.101	0.007	0.028
SCRENBC2	Conveyor from Screener	TP06	0.070	0.307	0.023	0.101	0.007	0.028
SCRENBC3	Conveyor from Screener	TP07	0.070	0.307	0.023	0.101	0.007	0.028
STACKBC1	Conveyor belt transfer	TP08	0.070	0.307	0.023	0.101	0.007	0.028
STACKBC2	Conveyor belt transfer	TP09	0.070	0.307	0.023	0.101	0.007	0.028
CRUSH2	Conveyor belt Feeding Crusher	TP10	0.070	0.307	0.023	0.101	0.007	0.028
CRUSHSCR1	Crushing Feeding Screener	TP11	0.070	0.307	0.023	0.101	0.007	0.028
SCRENBC4	Conveyor from Screener	TP12	0.070	0.307	0.023	0.101	0.007	0.028
SCRENBC5	Conveyor from Screener	TP13	0.070	0.307	0.023	0.101	0.007	0.028
SCRENBC6	Conveyor from Screener	TP14	0.070	0.307	0.023	0.101	0.007	0.028
SCRENBC7	Conveyor from Screener	TP15	0.070	0.307	0.023	0.101	0.007	0.028
<b>Total</b>			<b>6.495</b>	<b>28.446</b>	<b>2.183</b>	<b>9.563</b>	<b>0.099</b>	<b>0.436</b>
Annual Operations:		4,380,000		tons				
		8,760		hours				

Limestone	Emission Factors <sup>A</sup>			
	Controlled (Water Sprays)			
	PM	PM10	PM2.5	Units
Secondary Crushing	0.002	0.001	0.000	lb/ton
Screening	0.002	0.001	0.000	lb/ton
Truck Unloading	0.000016	0.000016	0.000016	lb/ton
Transfer - Conveyor	0.00014	0.000046	0.000013	lb/ton
Stockpiles	0.156	0.078	0.012	lb/day

A. Obtained from construction permit application from September 2021.

**Tank Emissions**

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

Title V ID	Source Description	Material	Capacity Value (gal)	Emission Factor <sup>B</sup> (lb/gal)				
				Benzene	Ethylbenzene	n-Hexane	Toluene	VOC
Tank No. 1	Diesel Fuel Tank	Diesel	10,000.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 2	Used Oil Tank at Maintenance garage	Used Oil	275.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 3	Used Oil Tank at Maintenance garage	Used Oil	275.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 4	#1 Oil Tank at Maintenance garage	Oil	275.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 5	#2 Oil Tank at Maintenance garage	Oil	275.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 6	#3 Oil Tank at Maintenance garage	Oil	275.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 7	#4 Oil Tank at Maintenance garage	Oil	275.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 8	Recycled Oil Tank near Float Plant	Recycled Oil	10,000.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 11	Kerosene Tank at C & R Shop	Kerosene	275.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 12	Gasoline Tank at Office Building	Gasoline	1,000.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 13	Lube Oil Tank at Scondary Crusher	Lube Oil	300.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 16	Recycled Oil	Recycled Oil	30,000.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 17	Recycled Oil	Recycled Oil	30,000.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 24	Petroleum Sulfonate (Conditioner) Tank at Float Plant	Conditioner	275.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 25	Two Propane Tanks at the electric shop 30,000 gallon each	Propane	60,000.00	--	--	--	--	--
Tank No. 26	Propane Tank at the Quarry	Propane	2,000.00	--	--	--	--	--
Tank No. 27	Propane Tank at #6 Oil Building	Propane	1,000.00	--	--	--	--	--
Tank No. 28	Two Propane Tanks at the C&R Shop	Propane	1,000.00	--	--	--	--	--
Tank No. 29	Sodium Hydroxide Tank	Sodium Hydroxide	8,200.00	--	--	--	--	--
Tank No. 30	Sulfuric Acid Tank	Sulfuric Acid	6,000.00	--	--	--	--	--
Tank No. 31	Floculent Tank	Floculent	500.00	--	--	--	--	3.03E-05
Tank No. 32	Anti-foam Tank	Anti-foam	2,500.00	--	--	--	--	3.03E-05
Tank No. 33	Promoter Tank	Promoter	12,000.00	--	--	--	--	3.03E-05

Title V ID	Source Description	Material	Throughput Value (gal)	Emission Rate (tpy) <sup>C</sup>				
				Benzene	Ethylbenzene	n-Hexane	Toluene	VOC
Tank No. 1	Diesel Fuel Tank	Diesel	120,000.00	0.0001	0.0001	0.0000	0.0006	0.0018
Tank No. 2	Used Oil Tank at Maintenance garage	Used Oil	3,300.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 3	Used Oil Tank at Maintenance garage	Used Oil	3,300.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 4	#1 Oil Tank at Maintenance garage	Oil	3,300.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 5	#2 Oil Tank at Maintenance garage	Oil	3,300.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 6	#3 Oil Tank at Maintenance garage	Oil	3,300.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 7	#4 Oil Tank at Maintenance garage	Oil	3,300.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 8	Recycled Oil Tank near Float Plant	Recycled Oil	120,000.00	0.0001	0.0001	0.0000	0.0006	0.0018
Tank No. 11	Kerosene Tank at C & R Shop	Kerosene	3,300.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 12	Gasoline Tank at Office Building	Gasoline	12,000.00	0.0000	0.0000	0.0000	0.0001	0.0002
Tank No. 13	Lube Oil Tank at Scondary Crusher	Lube Oil	3,600.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 16	Recycled Oil	Recycled Oil	360,000.00	0.0002	0.0002	0.0000	0.0017	0.0055
Tank No. 17	Recycled Oil	Recycled Oil	360,000.00	0.0002	0.0002	0.0000	0.0017	0.0055
Tank No. 24	Petroleum Sulfonate (Conditioner) Tank at Float Plant	Conditioner	3,300.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 25	Two Propane Tanks at the electric shop 30,000 gallon each	Propane	720,000.00	--	--	--	--	--
Tank No. 26	Propane Tank at the Quarry	Propane	24,000.00	--	--	--	--	--
Tank No. 27	Propane Tank at #6 Oil Building	Propane	12,000.00	--	--	--	--	--
Tank No. 28	Two Propane Tanks at the C&R Shop	Propane	12,000.00	--	--	--	--	--
Tank No. 29	Sodium Hydroxide Tank	Sodium Hydroxide	98,400.00	--	--	--	--	--
Tank No. 30	Sulfuric Acid Tank	Sulfuric Acid	72,000.00	--	--	--	--	--
Tank No. 31	Floculent Tank	Floculent	6,600.00	--	--	--	--	0.0001
Tank No. 32	Anti-foam Tank	Anti-foam	30,000.00	--	--	--	--	0.0005
Tank No. 33	Promoter Tank	Promoter	144,000.00	--	--	--	--	0.0022
<b>Total</b>				<b>0.0004</b>	<b>0.0006</b>	<b>0.0001</b>	<b>0.0048</b>	<b>0.0179</b>

A. Throughput based on 1 turnover per month per tank.  
 B. Emission factors from *Emission Factors for Tanks* table for each tank.  
 C. Emission Rate (tpy) = Emission Factor (lb/gal) \* Fuel Throughput (gal/year) \* (1 ton / 2,000 lb)

Tank No. 1 Diesel Fuel Tank Benzene Emission Rate (tpy)=

0.00000085 lb/gal	120,000.0 gal	1 ton 2,000 lb	=	0.0001 tpy
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**Company Name:**

U.S. Silica

**Site Name:**

Berkeley Springs Plant

**Project:**

Potential to Emit Calculations

**Summary of Emissions**

Source Type	Annual Emissions (tpy) <sup>A</sup>											
	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	CO	SO <sub>2</sub>	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	VOC	NH <sub>3</sub>	Lead
Baghouse Emissions	108.8828	108.8828	87.1062	-	-	-	-	-	-	-	-	-
Fluid Bed Dryer & Rotary Dryer	95.4800	95.4800	76.3840	-	-	-	-	-	-	-	-	-
Screening and Unground Sanding Processing CF#40	2.8908	2.8908	2.3126	-	-	-	-	-	-	-	-	-
Screening and Unground Sanding Processing CF#6	10.5120	10.5120	8.4096	-	-	-	-	-	-	-	-	-
Stockpile Emissions	2.4491	1.2245	0.1837	-	-	-	-	-	-	-	-	-
Blasting Emissions	0.1650	0.0858	0.0050	-	-	-	-	-	-	-	-	-
Unpaved Roads Emissions	331.6324	84.5209	8.4521	-	-	-	-	-	-	-	-	-
Permitted Limit Emissions	15.1986	15.1986	12.1589	-	-	-	-	-	-	-	-	-
Combustion Emissions (Total) <sup>B,C</sup>												
Fluid Bed Dryer Combustion Emissions	--	--	--	96.35	13.75	267.00	51380.1156	2.0525	0.4105	1.27	1.7770	0.2104
Fluid Rotary Dryer Combustion Emissions	--	--	--				10302.8330	0.4916	0.0983		0.2337	0.0000
New Limestone System	28.4459	9.5627	0.4358	-	-	-	-	-	-	-	-	-
Material Transfer, Screening, and Crushing Emissions	48.1876	19.7231	5.9534	-	-	-	-	-	-	-	-	-
Tank Emissions	-	-	-	-	-	-	-	-	-	0.0179	-	-
<b>Total</b>	<b>534.9615</b>	<b>239.1984</b>	<b>114.2950</b>	<b>96.3500</b>	<b>13.7500</b>	<b>267.0000</b>	<b>61682.9486</b>	<b>2.5441</b>	<b>0.5088</b>	<b>1.2879</b>	<b>2.0107</b>	<b>0.2104</b>

A. Due to the large number of pollutants, a summary of HAPs emissions from combustion are not presented in this table. Please see table on "EC Combustion-HAPs" and "Tanks" tab for summary of HAP emissions.

B. NOx, CO, SO2, and VOC emissions from combustion sources reference TVOP Emissions Limitations for these sources.

C. Particulate Matter emissions from combustion sources are accounted for in the Fluid Bed Dryer & Rotary Dryer Baghouse Emissions.



Roberts, Daniel P &lt;daniel.p.roberts@wv.gov&gt;

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**Fwd: West Virginia Air Quality Permit Issued**

1 message

---

**Martin, Thornton E** <thornton.e.martin@wv.gov>  
To: Daniel Roberts <daniel.p.roberts@wv.gov>

Mon, Nov 1, 2021 at 10:34 AM

----- Forwarded message -----

From: **McKeone, Beverly D** <beverly.d.mckeone@wv.gov>

Date: Mon, Nov 1, 2021 at 9:36 AM

Subject: Re: West Virginia Air Quality Permit Issued

To: Rigler, Andrew &lt;Rigler@ussilica.com&gt;

Cc: Bev McKeone &lt;beverly.d.mckeone@wv.gov&gt;, Martin, Thornton &lt;thornton.e.martin@wv.gov&gt;, Nicole D. Ernest &lt;nicole.d.ernest@wv.gov&gt;, Stephanie R Mink &lt;stephanie.r.mink@wv.gov&gt;

Andrew,

I think there may be some confusion. Title V cannot add these temporary conditions to the Title V permit. If the source wishes to continue these operations then you must apply for the usual/standard Construction/modification permit under Rule 13. Once that is issued, then Title V can roll those conditions into the Title V.

While you are preparing the Rule 13 permit for submittal and to cover these operations while the permit is under review - please submit a request for extension of the Temporary Permit. These permits are usually issued with an expiration date of 6 months after issuance. They can be extended for another 12 months (total of 18 months). The extension request must be submitted and granted prior to the expiration date of the Temporary permit. All that is needed is a letter signed by the responsible official, identifying the source by facility ID # and permit number and requesting an extension of the Temporary permit for another 12 months. This letter can be submitted via the DEP Air Quality Permitting email address.

Let me know if you have any questions. Or you can contact Lee Martin.

Bev

On Mon, Nov 1, 2021 at 7:16 AM Rigler, Andrew &lt;Rigler@ussilica.com&gt; wrote:

Ms. Ernest,

Temporary permit R13-3519T issued to U.S. Silica will expire November 11, 2021.

On 9/3/2021 U. S. Silica applied to have the temporary permit included in our current Title V permit R-30-0650001-2014. The current application is in the public notice and comment period but will most likely not be issued before the temporary permit expires on 11/11/21.

I would like to request an extension to the R13-3519T to bridge the gap between the period of submittal of approval for the Title V permit.

If you could advise of the procedure, It would be most appreciated.

Andy Rigler

US Silica

Berkeley Springs, WV

304-261-0254 (cell)

[rigler@ussilica.com](mailto:rigler@ussilica.com)

---

**From:** Ernest, Nicole D <[nicole.d.ernest@wv.gov](mailto:nicole.d.ernest@wv.gov)>  
**Sent:** Tuesday, May 11, 2021 10:04 AM  
**To:** Bish, Jason <[jbish@ussilica.com](mailto:jbish@ussilica.com)>; Rigler, Andrew <[Rigler@ussilica.com](mailto:Rigler@ussilica.com)>  
**Cc:** Beverly D McKeone <[beverly.d.mckeone@wv.gov](mailto:beverly.d.mckeone@wv.gov)>; Thornton E Martin <[thornton.e.martin@wv.gov](mailto:thornton.e.martin@wv.gov)>  
**Subject:** West Virginia Air Quality Permit Issued

**CAUTION:** This email originated from outside of U.S. Silica. Do not click links or open attachments unless you recognize the sender and know the content is safe.

**Permit Issued**

**U.S. Silica Company; Berkeley Springs**

**Permit Application No. R13-3519T**

**Plant ID No. 065-00001**

Mr. Bish:

Your application for a permit as required by Section 5 of 45CSR13 - "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permit Registrations, and Procedures for Evaluation" **has been approved.**

The attached R13-3519T is hereby issued pursuant to Subsection 5.7 of 45CSR13. Please be aware of the notification requirements in the permit which pertain to commencement of construction, modification, or relocation activities; startup of operations; and suspension of operations.

A copy of the signed permit can be sent via USPS upon request, by contacting Nicole Ernest at (304)926-0499 ext. 41256.

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [ §§22B-1-1 et seq. ], Chapter 22B of the Code of West Virginia. West Virginia Code §§22-5-14.

Should you have any questions, please contact Lee Martin at (304) 926-0499 ext. 41276.

Nicole Ernest

NSR Permitting Secretary

WV Department of Environmental Protection

Division of Air Quality

601 57th Street

Charleston, WV 25304

304-926-0499 x41256

--

**Beverly D. McKeone**

**NSR Program Manager**

**681-313-9077 (Mobile)**

**304-926-0499 Ext 41280 (Desk)**

**WV Department of Environmental Protection**

**Division of Air Quality**

**601 57th Street, SE**

**Charleston, WV 25304**



Roberts, Daniel P &lt;daniel.p.roberts@wv.gov&gt;

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**Fwd: West Virginia Air Quality Permit Issued**

1 message

---

**Martin, Thornton E** <thornton.e.martin@wv.gov>  
To: Daniel Roberts <daniel.p.roberts@wv.gov>

Mon, Nov 1, 2021 at 10:34 AM

----- Forwarded message -----

**From:** Martin, Thornton E <thornton.e.martin@wv.gov>  
**Date:** Mon, Nov 1, 2021 at 9:30 AM  
**Subject:** Re: West Virginia Air Quality Permit Issued  
**To:** Rigler, Andrew <Rigler@ussilica.com>

Good Morning Andy,

**§45-13-11. Temporary Construction or Modification Permits.**

11.2. To permit experimental, testing, commercial development and other temporary purposes, the Secretary may issue temporary permits for periods up to six (6) months (which may be extended in writing for up to twelve (12) additional months at the Secretary's discretion) upon the submission of a written application for such extension to the Secretary by the owner or operator.

Temporary Permit R13-3519T can be extended by submitting a request for the extension on company letterhead to [DEPAirQualityPermitting@wv.gov](mailto:DEPAirQualityPermitting@wv.gov).

Best Regards,

Thornton E. Martin Jr.

Permit Engineer

Division of Air Quality

601 57<sup>th</sup> Street, SE

Charleston, WV 25304

Phone: 304-926-0499 X41276

Fax: 304-926-0479

On Mon, Nov 1, 2021 at 7:16 AM Rigler, Andrew &lt;Rigler@ussilica.com&gt; wrote:

Ms. Ernest,

Temporary permit R13-3519T issued to U.S. Silica will expire November 11, 2021.

On 9/3/2021 U. S. Silica applied to have the temporary permit included in our current Title V permit R-30-0650001-2014. The current application is in the public notice and comment period but will most likely not be issued before the temporary permit expires on 11/11/21.

I would like to request an extension to the R13-3519T to bridge the gap between the period of submittal of approval for the Title V permit.

If you could advise of the procedure, It would be most appreciated.

Andy Rigler

US Silica

Berkeley Springs, WV

304-261-0254 (cell)

[rigler@ussilica.com](mailto:rigler@ussilica.com)

---

**From:** Ernest, Nicole D <[nicole.d.ernest@wv.gov](mailto:nicole.d.ernest@wv.gov)>

**Sent:** Tuesday, May 11, 2021 10:04 AM

**To:** Bish, Jason <[jbish@ussilica.com](mailto:jbish@ussilica.com)>; Rigler, Andrew <[Rigler@ussilica.com](mailto:Rigler@ussilica.com)>

**Cc:** Beverly D McKeone <[beverly.d.mckeone@wv.gov](mailto:beverly.d.mckeone@wv.gov)>; Thornton E Martin <[thornton.e.martin@wv.gov](mailto:thornton.e.martin@wv.gov)>

**Subject:** West Virginia Air Quality Permit Issued

**CAUTION:** This email originated from outside of U.S. Silica. Do not click links or open attachments unless you recognize the sender and know the content is safe.

#### **Permit Issued**

**U.S. Silica Company; Berkeley Springs**

**Permit Application No. R13-3519T**

**Plant ID No. 065-00001**

Mr. Bish:

Your application for a permit as required by Section 5 of 45CSR13 - "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permit Registrations, and Procedures for Evaluation" **has been approved.**

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Should you have any questions, please contact Lee Martin at (304) 926-0499 ext. 41276.

**Nicole Ernest**

NSR Permitting Secretary

WV Department of Environmental Protection

Division of Air Quality

[601 57th Street](#)

[Charleston, WV 25304](#)

304-926-0499 x41256



Roberts, Daniel P &lt;daniel.p.roberts@wv.gov&gt;

---

**Fwd: West Virginia Air Quality Permit Issued**

1 message

---

**Martin, Thornton E** <thornton.e.martin@wv.gov>  
To: Daniel Roberts <daniel.p.roberts@wv.gov>

Mon, Nov 1, 2021 at 10:34 AM

----- Forwarded message -----

From: **Ernest, Nicole D** <nicole.d.ernest@wv.gov>  
Date: Mon, Nov 1, 2021 at 7:32 AM  
Subject: Re: West Virginia Air Quality Permit Issued  
To: Rigler, Andrew <Rigler@ussilica.com>  
Cc: Thornton E Martin <thornton.e.martin@wv.gov>

Mr. Rigler,

Thank you so much for your email. Lee will contact you regarding the procedure to move forward.

I hope you have a great week.

Nicole Ernest  
304-926-0499 x41256

On Mon, Nov 1, 2021 at 7:16 AM Rigler, Andrew &lt;Rigler@ussilica.com&gt; wrote:

Ms. Ernest,

Temporary permit R13-3519T issued to U.S. Silica will expire November 11, 2021.

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Andy Rigler

US Silica

Berkeley Springs, WV

304-261-0254 (cell)

[rigler@ussilica.com](mailto:rigler@ussilica.com)



**From:** Ernest, Nicole D <[nicole.d.ernest@wv.gov](mailto:nicole.d.ernest@wv.gov)>  
**Sent:** Tuesday, May 11, 2021 10:04 AM  
**To:** Bish, Jason <[jbish@ussilica.com](mailto:jbish@ussilica.com)>; Rigler, Andrew <[Rigler@ussilica.com](mailto:Rigler@ussilica.com)>  
**Cc:** Beverly D McKeone <[beverly.d.mckeone@wv.gov](mailto:beverly.d.mckeone@wv.gov)>; Thornton E Martin <[thornton.e.martin@wv.gov](mailto:thornton.e.martin@wv.gov)>  
**Subject:** West Virginia Air Quality Permit Issued

**CAUTION:** This email originated from outside of U.S. Silica. Do not click links or open attachments unless you recognize the sender and know the content is safe.

## Permit Issued

**U.S. Silica Company; Berkeley Springs**

**Permit Application No. R13-3519T**

**Plant ID No. 065-00001**

Mr. Bish:

Your application for a permit as required by Section 5 of 45CSR13 - "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permit Registrations, and Procedures for Evaluation" **has been approved.**

The attached R13-3519T is hereby issued pursuant to Subsection 5.7 of 45CSR13. Please be aware of the notification requirements in the permit which pertain to commencement of construction, modification, or relocation activities; startup of operations; and suspension of operations.

A copy of the signed permit can be sent via USPS upon request, by contacting Nicole Ernest at (304)926-0499 ext. 41256.

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [ §§22B-1-1 et seq. ], Chapter 22B of the Code of West Virginia. West Virginia Code §§22-5-14.

Should you have any questions, please contact Lee Martin at (304) 926-0499 ext. 41276.

**Nicole Ernest**

NSR Permitting Secretary

WV Department of Environmental Protection

Division of Air Quality

601 57th Street

9/4/24, 2:27 PM

State of West Virginia Mail - Fwd: West Virginia Air Quality Permit Issued

[Charleston, WV 25304](#)

304-926-0499 x41256



Roberts, Daniel P &lt;daniel.p.roberts@wv.gov&gt;

---

**Fwd: West Virginia Air Quality Permit Issued**

1 message

---

**Martin, Thornton E** <thornton.e.martin@wv.gov>  
To: Daniel Roberts <daniel.p.roberts@wv.gov>

Mon, Nov 1, 2021 at 10:33 AM

----- Forwarded message -----

From: **Rigler, Andrew** <Rigler@ussilica.com>  
Date: Mon, Nov 1, 2021 at 7:16 AM  
Subject: RE: West Virginia Air Quality Permit Issued  
To: Ernest, Nicole D <nicole.d.ernest@wv.gov>  
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Thornton E Martin <thornton.e.martin@wv.gov>, Andrews, Chase <andrews@ussilica.com>

Ms. Ernest,

Temporary permit R13-3519T issued to U.S. Silica will expire November 11, 2021.

On 9/3/2021 U. S. Silica applied to have the temporary permit included in our current Title V permit R-30-0650001-2014. The current application is in the public notice and comment period but will most likely not be issued before the temporary permit expires on 11/11/21.

I would like to request an extension to the R13-3519T to bridge the gap between the period of submittal of approval for the Title V permit.

If you could advise of the procedure, It would be most appreciated.

Andy Rigler

US Silica

Berkeley Springs, WV

304-261-0254 (cell)

[rigler@ussilica.com](mailto:rigler@ussilica.com)

---

**From:** Ernest, Nicole D <nicole.d.ernest@wv.gov>  
**Sent:** Tuesday, May 11, 2021 10:04 AM  
**To:** Bish, Jason <jbish@ussilica.com>; Rigler, Andrew <Rigler@ussilica.com>  
**Cc:** Beverly D McKeone <beverly.d.mckeone@wv.gov>; Thornton E Martin <thornton.e.martin@wv.gov>  
**Subject:** West Virginia Air Quality Permit Issued

**CAUTION:** This email originated from outside of U.S. Silica. Do not click links or open attachments unless you recognize the sender and know the content is safe.

**Permit Issued**

**U.S. Silica Company; Berkeley Springs**

**Permit Application No. R13-3519T**

**Plant ID No. 065-00001**

Mr. Bish:

Your application for a permit as required by Section 5 of 45CSR13 - "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permit Registrations, and Procedures for Evaluation" **has been approved.**

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A copy of the signed permit can be sent via USPS upon request, by contacting Nicole Ernest at (304)926-0499 ext. 41256.

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Should you have any questions, please contact Lee Martin at (304) 926-0499 ext. 41276.

**Nicole Ernest**

NSR Permitting Secretary

WV Department of Environmental Protection

Division of Air Quality

601 57th Street

Charleston, WV 25304

304-926-0499 x41256



Roberts, Daniel P &lt;daniel.p.roberts@wv.gov&gt;

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**Fwd: WV Draft Permit R13-3535 for U.S. Silica Company; Berkeley Springs Quarry**

1 message

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**McCumbers, Carrie** <carrie.mccumbers@wv.gov>  
To: Daniel P Roberts <daniel.p.roberts@wv.gov>

Mon, Oct 18, 2021 at 12:59 PM

----- Forwarded message -----

From: **Mink, Stephanie R** <stephanie.r.mink@wv.gov>

Date: Mon, Oct 18, 2021 at 12:58 PM

Subject: WV Draft Permit R13-3535 for U.S. Silica Company; Berkeley Springs Quarry

To: Supplee, Gwendolyn &lt;supplee.gwendolyn@epa.gov&gt;, &lt;Weinelt.Eva@epa.gov&gt;, &lt;leary.justin@epa.gov&gt;, &lt;JBish@ussilica.com&gt;, &lt;rigler@ussilica.com&gt;

Cc: Crowder, Laura M &lt;Laura.M.Crowder@wv.gov&gt;, Beverly D McKeone &lt;beverly.d.mckeone@wv.gov&gt;, Carrie McCumbers &lt;carrie.mccumbers@wv.gov&gt;, Stephanie E Hammonds &lt;stephanie.e.hammonds@wv.gov&gt;, Thornton E Martin &lt;thornton.e.martin@wv.gov&gt;, Nicole D Ernest &lt;nicole.d.ernest@wv.gov&gt;, Johnson, Rebecca H &lt;Rebecca.H.Johnson@wv.gov&gt;, Christopher P Scanlan &lt;christopher.p.scanlan@wv.gov&gt;, Joseph A Kreger &lt;joseph.a.kreger@wv.gov&gt;

Please find attached the Draft Permit R13-3535, Engineering Evaluation and Public Notice for U.S. Silica Company's Berkeley Springs Quarry located in Morgan County.

The public notice will be published in *The Morgan Messenger* on Wednesday, October 20, 2021 and the thirty day comment period will end on Friday, November 19, 2021.

Should you have any questions or comments, please contact the permit writer, Thornton "Lee" Martin, at 304-926-0499 ext. 41276 or [Thornton.E.Martin@wv.gov](mailto:Thornton.E.Martin@wv.gov).

--

**Stephanie Mink**

Secretary 2

West Virginia Department of Environmental Protection

Division of Air Quality, Title V Permitting

601 57<sup>th</sup> Street SE

Charleston, WV 25304

Phone: 304-926-0499 x41281

---

**3 attachments** **065-00001\_DRAFT\_13-3535.pdf**  
463K

 **065-00001\_EVAL\_R13-3535.pdf**  
204K

 **AirQualityPermitNotice.pdf**  
64K

*West Virginia Department of Environmental Protection*

*Harold D. Ward  
Cabinet Secretary*

# Construction Permit



**R13-3535-D-R-A-F-T**

*This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§22-5-1 et seq.) and 45 C.S.R. 13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation. The permittee identified at the above-referenced facility is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.*

*Issued to:*

**U. S. Silica Company  
Berkeley Springs Quarry  
065-00001**

---

*Laura M. Crowder  
Director, Division of Air Quality*

*Issued: **D-R-A-F-T***

This permit will supercede and replace Permit: Not Applicable

Facility Location: 2496 Hancock Road  
Berkeley Springs, Morgan County, West Virginia  
Mailing Address: 2496 Hancock Road  
Berkeley Springs, West Virginia 25411  
Facility Description: Industrial Sand Processing Plant  
NAICS Codes: 212322  
UTM Coordinates: 739.64 km Easting • 4,393.47 km Northing • Zone 17  
Permit Type: Construction  
Description of Change: Applicant proposes to rent two portable crushers and three double deck screens to configure an aggregate processing plant for processing sandstone.

*Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [ §§22B-1-1 et seq. ], Chapter 22B of the Code of West Virginia. West Virginia Code §§22-5-14.*

---

*The source is subject to 45CSR30. Changes authorized by this permit must also be incorporated into the facility's Title V operating permit. Commencement of the operations authorized by this permit shall be determined by the appropriate timing limitations associated with Title V permit revisions per 45CSR30.*



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**1.0. Emission Units**

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/Modified	Maximum Capacity		Control Device <sup>1, 2</sup>
				TPH	TPY	
<b>Stockpiles</b>						
STOCKIT	FP01	Stockpile totaling 7,000 ft <sup>2</sup> >1" – 180,000 TPY 1"-1/4" – 540,000 TPY MFG. Sand – 180,000 TPY	2021	---	900,000	WS
<b>Equipment</b>						
CRUSH1T	E01	Hammermill Primary Crusher	2021	300 TPH	899,000	WS
CRUSH2T	E02	Hammermill Secondary Cone Crusher	2021	350 TPH	720,000	WS
SCREN1T	E03	Double Deck Scalping Screener	2021	450 TPH	899,000	WS
SCREN2T	E04	Double Deck Screener	2021	450 TPH	899,000	WS
SCREN3T	E05	Double Deck Screener	2021	350 TPH	720,000	WS
<b>Transfer Points</b>						
TRUCK1T	TP01	Loading the Feeder	2021	450 TPH	899,000	WS
FEEDER1T	TP02	Feeder Transfer to Crusher	2021	300 TPH	600,000	WS
CRUSH1T	TP03	Crusher Transfer to conveyor belt	2021	300 TPH	600,000	WS
SCREN1T	TP04	Belt Conveyor feeding screener	2021	450 TPH	899,000	WS
SCRENBC1T	TP05	screen to conveyor belt feeding crusher	2021	275 TPH	550,000	WS
SCRENBC2T	TP06	middle deck to stacking conveyor	2021	50 TPH	100,000	WS
SCRENBC3T	TP07	lower deck to stacking conveyor	2021	75 TPH	150,000	WS
STACKBC1T	TP08	middle deck to conveyor belt	2021	50 TPH	100,000	WS
STACKBC2T	TP09	lower deck to conveyor belt	2021	75 TPH	150,000	WS
CRUSH2T	TP10	Conveyor belt feeding secondary crusher	2021	350 TPH	720,000	WS
CRUSHSCR1T	TP11	Secondary crusher feeding belt conveyor	2021	350 TPH	720,000	WS
SCRENBC4T	TP12	Top deck feeding conveyor	2021	50 TPH	10,000	WS
SCRENBC5T	TP13	Middle deck feeding conveyor belt	2021	25 TPH	50,000	WS
SCRENBC6T	TP14	Lower deck feeding stacking belt conveyor	2021	50 TPH	100,000	WS
SCRENBC7T	TP15	Feed conveyor to wash plant	2021	225 TPH	500,000	WS

<sup>1</sup> WS – Water Spray

<sup>2</sup> Typically, the controls with this equipment include full enclosures, partial enclosures, partial enclosures w/water spray, water spray, minimum drop heights and none. However, the Applicant chose to base the estimated emissions using water sprays throughout (50% Control Efficiency).

## 2.0. General Conditions

### 2.1. Definitions

- 2.1.1. All references to the “West Virginia Air Pollution Control Act” or the “Air Pollution Control Act” mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The “Clean Air Act” means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. “Secretary” means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary’s designated representative for the purposes of this permit.

### 2.2. Acronyms

<b>CAAA</b>	Clean Air Act Amendments	<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>CBI</b>	Confidential Business Information	<b>NSPS</b>	New Source Performance Standards
<b>CEM</b>	Continuous Emission Monitor	<b>PM</b>	Particulate Matter
<b>CES</b>	Certified Emission Statement	<b>PM<sub>2.5</sub></b>	Particulate Matter less than 2.5 μm in diameter
<b>C.F.R. or CFR</b>	Code of Federal Regulations		
<b>CO</b>	Carbon Monoxide	<b>PM<sub>10</sub></b>	Particulate Matter less than 10μm in diameter
<b>C.S.R. or CSR</b>	Codes of State Rules		
<b>DAQ</b>	Division of Air Quality	<b>Ppb</b>	Pounds per Batch
<b>DEP</b>	Department of Environmental Protection	<b>Pph</b>	Pounds per Hour
		<b>Ppm</b>	Parts per Million
<b>dscm</b>	Dry Standard Cubic Meter	<b>Ppmv or ppmv</b>	Parts per Million by Volume
<b>FOIA</b>	Freedom of Information Act	<b>PSD</b>	
<b>HAP</b>	Hazardous Air Pollutant		Prevention of Significant Deterioration
<b>HON</b>	Hazardous Organic NESHAP	<b>Psi</b>	
<b>HP</b>	Horsepower	<b>SIC</b>	Pounds per Square Inch
<b>lbs/hr</b>	Pounds per Hour		Standard Industrial Classification
<b>LDAR</b>	Leak Detection and Repair	<b>SIP</b>	State Implementation Plan
<b>M</b>	Thousand	<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>MACT</b>	Maximum Achievable Control Technology	<b>TAP</b>	Toxic Air Pollutant
		<b>TPY</b>	Tons per Year
<b>MDHI</b>	Maximum Design Heat Input	<b>TRS</b>	Total Reduced Sulfur
<b>MM</b>	Million	<b>TSP</b>	Total Suspended Particulate
<b>MMBtu/hr or mmbtu/hr</b>	Million British Thermal Units per Hour	<b>USEPA</b>	United States Environmental Protection Agency
<b>MMCF/hr or mmcf/hr</b>	Million Cubic Feet per Hour	<b>UTM</b>	Universal Transverse Mercator
<b>NA</b>	Not Applicable	<b>VEE</b>	Visual Emissions Evaluation
<b>NAAQS</b>	National Ambient Air Quality Standards	<b>VOC</b>	Volatile Organic Compounds
		<b>VOL</b>	Volatile Organic Liquids
<b>NESHAPS</b>	National Emissions Standards for Hazardous Air Pollutants		

### **2.3. Authority**

This permit is issued in accordance with West Virginia Air Pollution Control Act W.Va. Code §§ 22-5-1. et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

### **2.4. Term and Renewal**

- 2.4.1. This Permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any other applicable legislative rule;

### **2.5. Duty to Comply**

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-3535, and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;  
**[45CSR§§13-5.10 and 10.3.]**
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

### **2.6. Duty to Provide Information**

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

**2.7. Duty to Supplement and Correct Information**

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

**2.8. Administrative Update**

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.  
[45CSR§13-4.]

**2.9. Permit Modification**

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.  
[45CSR§13-5.4.]

**2.10 Major Permit Modification**

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.  
[45CSR§13-5.1]

**2.11. Inspection and Entry**

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

## **2.12. Emergency**

- 2.12.1. An “emergency” means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
- 2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.
- 2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
  - b. The permitted facility was at the time being properly operated;
  - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
  - d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
- 2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- 2.12.5 The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

## **2.13. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

**2.14. Suspension of Activities**

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

**2.15. Property Rights**

This permit does not convey any property rights of any sort or any exclusive privilege.

**2.16. Severability**

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

**2.17. Transferability**

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1.]

**2.18. Notification Requirements**

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

**2.19. Credible Evidence**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

### 3.0. Facility-Wide Requirements

#### 3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.  
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.  
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management, and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.  
[40CFR§61.145(b) and 45CSR§34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.  
[45CSR§4-3.1] *[State Enforceable Only]*
- 3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.  
[45CSR§13-10.5.]
- 3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.  
[45CSR§11-5.2.]

#### 3.2. Monitoring Requirements

*[Reserved]*



### 3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:
- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
  - b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
  - c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
  - d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a

summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language;
2. The result of the test for each permit or rule condition; and,
3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13]

### 3.4. Recordkeeping Requirements

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.
- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.

[45CSR§4. *State Enforceable Only.*]

### 3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by email as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

**DAQ:**  
Director  
WVDEP  
Division of Air Quality  
601 57<sup>th</sup> Street  
Charleston, WV 25304-2345

**US EPA:**  
Section Chief  
U.S. Environmental Protection Agency, Region III  
Enforcement and Compliance Assurance Division Air  
Section (3ED21)  
1650 Arch Street  
Philadelphia, PA 19103-2029

**DAQ Compliance and Enforcement<sup>1</sup>:**  
[DEPAirQualityReports@wv.gov](mailto:DEPAirQualityReports@wv.gov)

<sup>1</sup>For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status Reports, Initial Notifications, etc.

3.5.4. **Operating Fee**

3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, the permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

## 4.0. Source-Specific Requirements

### 4.1. Limitations and Standards

- 4.1.1. In accordance with the information filed in Permit Application R13-3535, the equipment/processes identified under Section 1.0 Emission Units of this permit shall be installed, maintained, and operated so as to minimize any fugitive escape of pollutants, shall not exceed the listed maximum design capacities and/or throughputs, and shall use the specified control devices.
- 4.1.2. The maximum transfer rate of material through the crushers and screens shall not exceed hourly and annual throughput rates identified under Section 1.0 Emission Units of this permit. Said limits shall be based on a 12-month rolling total.
- 4.1.3. The permitted facility shall comply with all applicable requirements of 45CSR§7 - “To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations,” provided that the facility shall comply with any more stringent requirements as may be set forth under section 4.1. of this permit. The pertinent sections of 45CSR§7 applicable to this facility include, but are not limited to, the following:
- 4.1.3.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7.  
**[45CSR§7-3.1.]**
- 4.1.3.2. The provisions of subsection 3.1 shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period.  
**[45CSR§7-3.2.]**
- 4.1.3.3. No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A found at the end of this rule.  
**[45CSR§7-4.1.]**
- 4.1.3.4. No person shall cause, suffer, allow, or permit any manufacturing process generating fugitive particulate matter to operate that is not equipped with a system to minimize the emissions of fugitive particulate matter. To minimize means that a particulate capture or suppression system shall be installed to ensure the lowest fugitive particulate emissions reasonably achievable. The permitted facility shall comply with all applicable requirements of 45CSR§7, with the exception of any more stringent limitations set forth in Section 4.1. of this permit.  
**[45CSR§7-5.1.]**
- 4.1.3.5. The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter

suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment. [45CSR§7-5.2.]

- 4.1.4. The facility is subject to 40 CFR 60 Subpart OOO, including but not limited to following:
- 4.1.4.1. Except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart.  
[40CFR 60.670(a)(1)]
- 4.1.4.2. An affected facility under paragraph (a) of this section that commences construction, modification or reconstruction after August 31, 1983, is subject to the requirements of this part.  
[40CFR 60.670(e)]
- 4.1.4.3. Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.8. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.  
[40CFR 60.672(b)]
- 4.1.4.4. A crusher shall not discharge fugitive emissions into the atmosphere greater than 12 percent opacity;  
[40CFR§60.672(b)]
- 4.1.4.5. Fugitive emission from the transfer points on the belt conveyors shall not discharge fugitive emissions into the atmosphere greater than 7 percent opacity;  
[40CFR§60.672(b)]
- 4.1.5. **Owners and Operators of Engines classified as Nonroad.** Owners and operators of engines classified as nonroad must ensure that the engine does not remain at a location for more than 12 months, with location being any single site at a building, structure, facility or installation.  
[40CFR§1068.30]

A nonroad engine ceases to be a nonroad engine and becomes a new stationary engine if - (1) At any time, it meets the criteria specified in paragraph (2)(iii) in the definition of “nonroad engine” in § 1068.30. For example, a portable generator engine ceases to be a nonroad engine if it is used or will be used in a single specific location for 12 months or longer. If we determine that an engine will be or has been used in a single specific location for 12 months or longer, it ceased to be a nonroad engine when it was placed in that location.  
[40 CFR § 1068.31(e)(1)]

- 4.1.6. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary. [45CSR§13-5.10.]

## 4.2. Monitoring Requirements

- 4.2.1. For the purpose of determining compliance with the opacity limits of 40 CFR 60 Subpart OOO, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.
- a. The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course.
  - b. Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source (stack, transfer point, fugitive emission source, etc.) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions.
  - c. If visible emissions are present at a source(s) for three (3) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.
- 4.2.2. The permittee shall install instrumentation to measure both volumetric flow rate and water pressure as supplied to the facility's water spray bars on a daily basis. At the beginning and end of each operating day, the water pressure and ambient temperature shall be recorded. At the end of each operating day, the tonnage of rock processed, the amount of water (measured in gallons) utilized that day, the number of hours of operation, and a description of the day's weather conditions shall be recorded. Such records shall be maintained in accordance with Condition 3.4.1. of this permit.
- 4.2.3. The permittee shall perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The permittee must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under §60.676(b). Such records shall be maintained in accordance with Condition 3.4.1. of this permit. [40CFR§§60.674(b)]

The permittee may combine the records as required in Condition 4.2.2. and records of these monthly inspections into one document or logbook.

#### 4.3. Testing Requirements

- 4.3.1. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of equipment, the permittee shall conduct performance test(s) to demonstrate compliance with the visible emission standards in Condition 4.1.4. for the sources listed in Section 1.0 of this permit. Such testing conducted in accordance with the following.

**[40CFR§60.8(a)]**

- (a) Such testing shall be conducted in accordance with Condition 3.3.1. of this permit.
- (b) Such testing shall be conducted while the piece is processing or handling stone equal to or greater than 90 percent its hourly throughput limit (585 tons per hour) as listed in Section 1.0 or at the maximum throughput possible.
- (c) Method 9 of Appendix A-4, 40 CFR 60 shall be used with the following additions;
  - (i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).  
**[40CFR§§60.675(c)(1)(i)]**
  - (ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of 40CFR60, Section 2.1) must be followed.  
**[40CFR§§60.675(c)(1)(ii)]**
  - (iii) At locations where water sprays are employed at, the water mist must not be confused with particulate matter emissions and is not be considered visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.  
**[40CFR§§60.675(c)(1)(iii)]**
  - (iv) Duration of the Method 9 Observation must be 30 minutes (five 6-minute observations). Compliance with the visible emission standard in Conditions 4.1.1.c. and f. must be based on the average of five 6-minute averages.  
**[40CFR§§60.675(c)(3)]**
  - (v) If emissions from two or more affected sources continuously interfere so that the opacity from an individual affected facility cannot be read, either of the following procedures may be used:
    - 1. Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.  
**[40CFR§§60.675(e)(1)(i)]**
    - 2. Separate the emissions so that the opacity of emissions from each affected facility can be read.  
**[40CFR§§60.675(e)(1)(ii)]**

(vi) A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:

1. No more than three emission points may be read concurrently.  
[40CFR§§60.675(e)(2)(i)]
2. All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.  
[40CFR§§60.675(e)(2)(ii)]
3. If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.  
[40CFR§§60.675(e)(2)(iii)]

(d) During such testing, the permittee shall monitor and record the water pressure, flow rate of the water sprays, and the hourly throughput or process rate of the piece of equipment at which the observation is occurring. Such records shall include the water pressure and flow rate at the beginning and the at end of the last observation for the actual operation day. Such records shall be included in with the test results and maintained in accordance with Condition 3.4.1 of this permit.

#### 4.4. Recordkeeping Requirements

4.4.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:

- a. The date, place as defined in this permit and time of sampling or measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of the analyses; and
- f. The operating conditions existing at the time of sampling or measurement.

4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.



- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
  - f. Steps taken to correct the malfunction.
  - g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 4.4.4. For the purpose of determining compliance with maximum throughput and operation limits set forth in 4.1.2., the applicant shall maintain certified daily and monthly records. An example form is included as Appendix C. Compliance will be determined on a 12- month rolling total. These records shall be maintained on-site for a period of five (5) years and be made available to the Director of the Division of Air Quality or his/her duly authorized representative upon request.
- 4.4.5. The permittee shall maintain records of all monitoring data required by Section 4.2.1 documenting the date and time of each visible emission check, the emission point or equipment / source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6-10 mph NE wind) during the visual emission check(s). An example form is supplied as Appendix A. Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the normal monthly evaluation, the record of observation may note "out of service" (O/S) or equivalent.

#### **4.5. Reporting Requirements**

- 4.5.1. Test results shall be submitted to the Director no more than sixty (60) days after the date the testing takes place.
- 4.5.2. Any exceedances of the allowable visible emission requirement for any emission source discovered during observation using 40CFR Part 60, Appendix A, Method 9 must be reported in writing to the Director as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the exceedances, and any corrective measures taken or planned.
- 4.5.3. The permittee shall submit written notification of the following items within the specified time frames to the Director:

A notification of the actual date of initial startup of an affected facility dated within 15 days after such date. [40CFR§60.7(3)]

**APPENDIX A <sup>1</sup>**

**[Weekly/ Monthly/Quarterly] Opacity Record  
U.S. Silica Company – Berkeley Springs Quarry  
COMPANY ID NO. 065-00001  
PERMIT NO. R13-3535**

Date of Observation:

Date Entered by:

Reviewed by:

Date Reviewed:

Describe the General Weather Conditions:

<b>Emission Point ID</b>	<b>Description of Emission Point</b>	<b>Time of Observation</b>	<b>Visible Emissions (Yes/No)</b>	<b>Consecutive Months of Visible Emission</b>	<b>Comments</b>

(1) The CERTIFICATION OF DATA ACCURACY statement appearing on the reverse side shall be completed within fifteen (15) days of the end of the reporting period. All records shall be kept on site for a period of no less than five (5) years and shall be made available to the Secretary or his or her duly authorized representative upon request.

**APPENDIX B <sup>1</sup>**

**Certified Daily and Monthly Water Usage by the Water Truck**  
 U.S. Silica Company – Berkeley Springs Quarry  
 COMPANY ID NO. 065-00001  
 PERMIT NO. R13-3535

Month \_\_\_\_\_ Year \_\_\_\_\_

<b>Date</b>	<b>Water Truck Used (Y/N)</b>	<b>Quantity of Water Used (gallons)<sup>2</sup></b>	<b>Comments<sup>3</sup></b>	<b>Initials</b>
<b>1</b>				
<b>2</b>				
<b>3</b>				
<b>4</b>				
<b>5</b>				
<b>6</b>				
<b>7</b>				
<b>8</b>				
<b>9</b>				
<b>10</b>				
<b>11</b>				
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<b>26</b>				
<b>27</b>				
<b>28</b>				
<b>29</b>				
<b>30</b>				
<b>31</b>				

- (1) The CERTIFICATION OF DATA ACCURACY statement appearing on the reverse side shall be completed within fifteen (15) days of the end of the reporting period. All records shall be kept on site for a period of no less than five (5) years and shall be made available to the Secretary or his or her duly authorized representative upon request.
- (2) The quantity of water used may be estimated based on the volume of the water truck’s tank and the number of times the water truck was filled.
- (3) Use the comment section to explain why the water truck was not in use or used sparingly.

**APPENDIX C <sup>1</sup>**

**U.S. Silica Company – Berkeley Springs Quarry  
 COMPANY ID NO. 065-00001  
 PERMIT NO. R13-3535**

**Certified Daily and Monthly Amount of Hours Operated and Material processed for Useable Product**  
 Month \_\_\_\_\_ Year \_\_\_\_\_

Day of Month	Material transferred to CRUSH1T (in tons)	Material transferred to CRUSH2T (in tons)	Material transferred to SCREN1T (in tons)	Material transferred to SCREN2T (in tons)	Material transferred to SCREN3T (in tons)	Hours Operated (hrs)	Initials
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
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24							
25							
26							
27							
28							
29							
30							
31							
<b>Monthly Total</b>							
<b>12-Month Rolling Total <sup>2</sup></b>							

- (1) The CERTIFICATION OF DATA ACCURACY statement shall be completed within fifteen (15) days of the end of the reporting period. All records shall be kept on site for a period of no less than five (5) years and shall be made available to the Secretary or his or her duly authorized representative upon request.
- (2) The 12-Month Rolling Total shall mean, for example, the sum of material loaded into the screen at any given time during the previous twelve (12) consecutive calendar months. The maximum permitted 12-Month Rolling Total for the equipment shall not exceed that outlined in Section 1.0 of this permit.

### CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached \_\_\_\_\_, representing the period beginning \_\_\_\_\_ and ending \_\_\_\_\_, and any supporting documents appended hereto, is true, accurate, and complete.

Signature<sup>1</sup> \_\_\_\_\_  
(please use blue ink) Responsible Official or Authorized Representative Date

Name & Title \_\_\_\_\_  
(please print or type) Name Title

Telephone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

- 
- <sup>1</sup> This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:
- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
    - (i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
    - (ii) the delegation of authority to such representative is approved in advance by the Director;
  - b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
  - c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of U.S. EPA); or
  - d. The designated representative delegated with such authority and approved in advance by the Director.



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west virginia department of environmental protection

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Division of Air Quality  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
(304) 926-0475

Harold D. Ward, Cabinet Secretary  
dep.wv.gov

## ENGINEERING EVALUATION / FACT SHEET

### BACKGROUND INFORMATION

Registration No.: R13-3535  
Plant ID No.: 065-00001  
Applicant: U.S. Silica Company  
Facility Name: Berkeley Springs Quarry  
Location: Berkeley Springs, Morgan County  
SIC Code: 1446  
NAICS Code: 212322  
Application Type: Construction  
Received Date: September 20, 2021  
Engineer Assigned: Thornton E. Martin Jr.  
Fee Amount: \$2,000.00  
Fee Received Date: September 20, 2021  
Assigned Date: September 21, 2021  
Complete Date: October 6, 2021  
Applicant Ad Date: September 8, 2021  
Newspaper: *The Morgan Messenger*  
UTM's: Easting: 739.64 km    Northing: 4,393.47 km    Zone: 17  
Description: Applicant proposes to rent two portable crushers and three double deck screens to configure an aggregate processing plant for processing sandstone.

### PROCESS DESCRIPTION (taken from Application R13-3535)

The construction permit application details the use of a limestone crushing and screening plant that will utilize currently stockpiled limestone in the existing quarry at U.S. Silica's Berkeley Springs facility.

Promoting a healthy environment.

The existing stockpiled crushed rock will be transported via front end loader onto the crusher plant at a rate of 450 TPH. The crushing plant with water sprays for control is equipped with a conveying system, screening system, secondary crusher and stockpiling conveyors. Once the material passes through the screens, the oversized material will transfer via conveyor belt to a secondary crusher and back to a screen for sorting into stockpiles of finished product or to a wash plant that will use water to saturate the material for sorting and stockpiling that will be picked by the customer. The undersized material will transfer via conveyor belt to small pile that will be transported via front-end loader back to the existing stockpile of limestone.

The following table provides a listing of the emission units to be added:

Table 1: Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/Modified	Maximum Capacity		Control Device <sup>1, 2</sup>
				TPH	TPY	
<b>Stockpiles</b>						
STOCKIT	FP01	Stockpile totaling 7,000 ft <sup>2</sup> >1" – 180,000 TPY 1"-1/4" – 540,000 TPY MFG. Sand – 180,000 TPY	2021	---	900,000	WS
<b>Equipment</b>						
CRUSH1T	E01	Hammermill Primary Crusher	2021	300 TPH	899,000	WS
CRUSH2T	E02	Hammermill Secondary Cone Crusher	2021	350 TPH	720,000	WS
SCREN1T	E03	Double Deck Scalping Screen	2021	450 TPH	899,000	WS
SCREN2T	E04	Double Deck Screen	2021	450 TPH	899,000	WS
SCREN3T	E05	Double Deck Screen	2021	350 TPH	720,000	WS
<b>Transfer Points</b>						
TRUCK1T	TP01	Loading the Feeder	2021	450 TPH	899,000	WS
FEEDER1T	TP02	Feeder Transfer to Crusher	2021	300 TPH	600,000	WS
CRUSH1T	TP03	Crusher Transfer to conveyor belt	2021	300 TPH	600,000	WS
SCREN1T	TP04	Belt Conveyor feeding screen	2021	450 TPH	899,000	WS
SCRENBC1T	TP05	screen to conveyor belt feeding crusher	2021	275 TPH	550,000	WS
SCRENBC2T	TP06	middle deck to stacking conveyor	2021	50 TPH	100,000	WS
SCRENBC3T	TP07	lower deck to stacking conveyor	2021	75 TPH	150,000	WS
STACKBC1T	TP08	middle deck to conveyor belt	2021	50 TPH	100,000	WS
STACKBC2T	TP09	lower deck to conveyor belt	2021	75 TPH	150,000	WS
CRUSH2T	TP10	Conveyor belt feeding secondary crusher	2021	350 TPH	720,000	WS
CRUSHSCR1T	TP11	Secondary crusher feeding belt conveyor	2021	350 TPH	720,000	WS
SCRENBC4T	TP12	Top deck feeding conveyor	2021	50 TPH	10,000	WS
SCRENBC5T	TP13	Middle deck feeding conveyor belt	2021	25 TPH	50,000	WS
SCRENBC6T	TP14	Lower deck feeding stacking belt conveyor	2021	50 TPH	100,000	WS
SCRENBC7T	TP15	Feed conveyor to wash plant	2021	225 TPH	500,000	WS

<sup>1</sup> WS – Water Spray

<sup>2</sup> Typically, the controls with this equipment include full enclosures, partial enclosures, partial enclosures w/water spray, water spray, minimum drop heights and none. However, the Applicant chose to base the estimated emissions using water sprays throughout (50% Control Efficiency).

SITE INSPECTION

Mr. Joseph Kreger of the Division of Air Quality, Compliance and Enforcement Section, Eastern Panhandle Regional Office performed a full, on-site, targeted inspection of the facility on June 29, 2021. Mr. Kreger noted that the facility has implemented an automated system to monitor Visual Emissions, throughput was below permitted limits and Visual Emissions from stacks was in compliance at the time of inspection. The facility received an overall Status Code of 30 – In Compliance.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

The Applicant published the increased potential to discharge the following Regulated Air Pollutants to be: PM: 13.048 TPY, PM10: 4.403 TPY, PM2.5: 0.115 TPY.

The Applicant was asked to recalculate emissions in which particulate matter emissions from the equipment are based on emission factors from U.S. EPA, AP-42, Fifth Edition, Revised 8/2004, Chapter 11.19.2, Table 11.19.2-2 for crushing, screening and transfer points. As well as AP-42, Fifth Edition, (November 2006), Sections 13.2.2, 13.2.4 and 13.2.5 for precipitation, silt content and k factors, respectively.

The following table provides a summary of the Applicants' revised increased potential to discharge:

Table 2: Estimated Emissions

<i>Emissions Summary - U.S. Silica Company Berkeley Springs Quarry R13-3535</i>	Controlled PM Emissions		Controlled PM <sub>10</sub> Emissions		Controlled PM <sub>2.5</sub> Emissions	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
<b>Fugitive Emissions</b>						
Stockpile Emissions	0.00	0.01	0.00	0.01	0.00	0.00
Unpaved Haulroad Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Paved Haulroad Emissions	0.00	0.00	0.00	0.00	0.00	0.00
<i>Fugitive Emissions Total</i>	<i>0.00</i>	<i>0.01</i>	<i>0.00</i>	<i>0.01</i>	0.00	0.00
<b>Point Source Emissions</b>						
Equipment Emissions	16.87	17.16	6.01	6.13	1.21	1.23
Transfer Point Emissions	0.59	0.59	0.28	0.28	0.04	0.04
<i>Point Source Emissions Total</i>	<i>17.46</i>	<i>17.75</i>	<i>6.29</i>	<i>6.41</i>	<i>1.25</i>	<i>1.27</i>
<b>FACILITY EMISSIONS TOTAL</b>	<b>17.47</b>	<b>17.77</b>	<b>6.29</b>	<b>6.42</b>	<b>0.96</b>	<b>2.43</b>



## REGULATORY APPLICABILITY

Berkeley Springs Plant processes Aggregate and Silica which is classified as a non-metallic mineral. Thus, these additions are affected sources under 40 CFR 60, Subpart OOO - Standard of Performance for Nonmetallic Mineral Processing Plants.

The proposed construction of a crushing and screening plant at the Berkeley Springs Quarry is subject to the following state and federal rules:

*45CSR7 To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associate Operations*

The purpose of this rule is to prevent and control particulate matter air pollution from manufacturing processes and associated operations. The facility is subject to the requirements of this rule because it meets the definition of "Manufacturing Process" found in Section 2.20 of this rule; Subsection 3.7 - no visible emissions from any storage structure pursuant to subsection 5.1 which is required to have an enclosure; Subsection 4.1 - PM emissions shall not exceed those under Table 45-7A; Subsection 5.1 - manufacturing process and storage structures must be equipped with a system to minimize emissions; Subsection 5.2 - minimize PM emissions from haul roads and plant premises.

According to Table 45-7A, for a type 'a' source with a maximum process weight rate of 900,000 lb/hour, the maximum allowable emission rate is 50 lb/hour of particulate matter. The maximum emission rate is 17.46 lb/hour of particulate matter according to calculated emissions in fact sheet R13-3535.

*45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation*

The applicant is applying for a Construction Permit for the Berkeley Springs Quarry. The facility is subject to the following sections of this rule: reporting requirements, requirements for modifications of stationary sources, demonstrating compliance with stationary sources, public review procedures, and permit application fees. The facility will demonstrate compliance by following all the applicable rules and regulations that apply to the facility. They will also follow the terms and conditions set forth in permit R13-3535. The applicant published a Class I legal advertisement in *The Morgan Messenger* on September 8, 2021 and submitted an application fee of \$1,000.00 and \$1,000 NSPS fee.

*45CSR16 Standards of Performance for New Stationary Sources*

This rule establishes and adopts standards of performance for new stationary sources promulgated by the United States Environmental Protection Agency pursuant to section 111(b) of the federal Clean Air Act, as amended (CAA). The facility is subject to 40CFR60 Subpart OOO.

*45CSR14 Permits for Construction and Major Modification of Major Stationary Sources for the Prevention of Significant Deterioration of Air Quality*

This proposed construction is occurring at a major source as defined in Rule 14 (Prevention of Significant Deterioration). However, the increased controlled emissions from this project by itself do not exceed the 10 tons of PM<sub>2.5</sub>, 15 tons of PM<sub>10</sub>, or 25 tons of PM significance levels. By rule, no further review is required. Morgan County is classified as 'attainment' for all six criteria pollutants. Therefore, this construction does not require to be reviewed under Rule 19 (Nonattainment New Source Review Program).

*40CFR60 Subpart OOO: Standards of Performance for Nonmetallic Minerals Processing Plant*

The facility shall be in compliance with 60.672 (b) no greater than 7% opacity from any transfer point on belt conveyors or from any other affected facility (as defined in 60.670 and 60.671) and no greater than 12% opacity from any crusher when the particulate matter control methods and devices proposed within application R13-3535 are in operation.

Under Subpart OOO, USS will be required to conduct compliance demonstrations to satisfy the testing requirement of §60.672 within 180 days after initial start-up of the new sources.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

This construction does not constitute the release of any other pollutant other than fine particulate matter (PM<sub>2.5</sub>). As a result, no information concerning the toxicity of non-criteria regulated pollutants was presented in this section.

AIR QUALITY IMPACT ANALYSIS

The writer deemed that an air dispersion modeling study or analysis was not necessary, because the proposed construction does not meet the definition as a major modification of a major source as defined in 45CSR14.

## MONITORING OF OPERATIONS

Subpart OOO requires the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system.

The applicant will be required to conduct initial performance testing to demonstrate compliance with the PM concentration limit. In addition, the applicant will conduct initial testing and repeat such testing once every five years for demonstrating compliance with the fugitive emission limit.

## RECOMMENDATION TO DIRECTOR

The information provided in the permit application indicates the proposed construction of a crushing and screening plant will meet all the requirements of the application rules and regulations when operated in accordance to the permit application. Therefore, this writer recommends granting U.S. Silica Company a Rule 13 Construction Permit for their aggregate processing plant located near Berkeley Springs, WV.

Thornton E. Martin Jr. Digitally signed by: Thornton E. Martin Jr.  
DN: CN = Thornton E. Martin Jr, email = thornton.e.martin@wv.gov C = US O = WV Department of Environmental Protection OU = Division of Air Quality  
Date: 2021.10.08 11:25:01 -0400

Thornton E. Martin Jr.  
Permit Engineer

October 7, 2021  
Date

# AIR QUALITY PERMIT NOTICE

## Notice of Intent to Approve

On September 20, 2021, U. S. Silica Company applied to the WV Department of Environmental Protection, Division of Air Quality (DAQ) for a Construction Permit for their Berkeley Springs Quarry in Berkeley Springs, Morgan County, WV. The latitude and longitude are: 39.65741 N and -78.20670 W. A preliminary evaluation has determined that all State and Federal air quality requirements will be met by the proposed facility. The DAQ is providing notice to the public of its preliminary determination to issue the permit as R13-3535.

The following change in potential to discharge emissions will be authorized by this permit action: Particulate Matter, 17.77 tons per year (TPY), Particulate Matter less than 10 microns, 6.42 TPY and Particulate Matter less than 2.5 microns, 2.43 TPY.

Written comments or requests for a public meeting must be received by the DAQ before 5:00 p.m. on Friday, November 19, 2021. A public meeting may be held if the Director of the DAQ determines that significant public interest has been expressed, in writing, or when the Director deems it appropriate.

The purpose of the DAQ's permitting process is to make a preliminary determination if the proposed construction will meet all state and federal air quality requirements. The purpose of the public review process is to accept public comments on air quality issues relevant to this determination. Only written comments received at the address noted below within the specified time frame, or comments presented orally at a scheduled public meeting, will be considered prior to final action on the permit. All such comments will become part of the public record.

Thornton E. Martin Jr.  
WV Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
Telephone: 304/926-0499, ext. 41276  
Email: thornton.e.martin@wv.gov

Additional information, including copies of the draft permit, application and all other supporting materials relevant to the permit decision may be obtained by contacting the engineer listed above. The draft permit and engineering evaluation can be downloaded at:

<https://dep.wv.gov/daq/permitting/Pages/NSR-Permit-Applications.aspx>

**Attachment S**  
**Title V Permit Revision Information**

<b>1. New Applicable Requirements Summary</b>	
Mark all applicable requirements associated with the changes involved with this permit revision:	
<input type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input checked="" type="checkbox"/> Minor source NSR (45CSR13)	<input type="checkbox"/> PSD (45CSR14)
<input type="checkbox"/> NESHAP (45CSR15)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input type="checkbox"/> Section 111 NSPS (Subpart(s) _____)	<input type="checkbox"/> Section 112(d) MACT standards (Subpart(s) _____)
<input type="checkbox"/> Section 112(g) Case-by-case MACT	<input type="checkbox"/> 112(r) RMP
<input type="checkbox"/> Section 112(i) Early reduction of HAP	<input type="checkbox"/> Consumer/commercial prod. reqts., section 183(e)
<input type="checkbox"/> Section 129 Standards/Reqts.	<input type="checkbox"/> Stratospheric ozone (Title VI)
<input type="checkbox"/> Tank vessel reqt., section 183(f)	<input type="checkbox"/> Emissions cap 45CSR§30-2.6.1
<input type="checkbox"/> NAAQS, increments or visibility (temp. sources)	<input type="checkbox"/> 45CSR27 State enforceable only rule
<input type="checkbox"/> 45CSR4 State enforceable only rule	<input type="checkbox"/> Acid Rain (Title IV, 45CSR33)
<input type="checkbox"/> Emissions Trading and Banking (45CSR28)	<input type="checkbox"/> Compliance Assurance Monitoring (40CFR64) <sup>(1)</sup>
<input type="checkbox"/> NO <sub>x</sub> Budget Trading Program Non-EGUs (45CSR1)	<input type="checkbox"/> NO <sub>x</sub> Budget Trading Program EGUs (45CSR26)
<p><sup>(1)</sup> If this box is checked, please include <b>Compliance Assurance Monitoring (CAM) Form(s)</b> for each Pollutants Specific Emission Unit (PSEU) (See Attachment H to Title V Application). If this box is not checked, please explain why <b>Compliance Assurance Monitoring</b> is not applicable:</p> <p style="padding-left: 40px;">Proposed equipment does not meet CAM requirements</p>	

<b>2. Non Applicability Determinations</b>
<p>List all requirements, which the source has determined not applicable to this permit revision and for which a permit shield is requested. The listing shall also include the rule citation and a rationale for the determination.</p> <p>N/A</p>
<p><input type="checkbox"/> <b>Permit Shield Requested</b> <i>(not applicable to Minor Modifications)</i></p>

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

**3. Suggested Title V Draft Permit Language**

Are there any changes involved with this Title V Permit revision outside of the scope of the NSR Permit revision?  Yes  No If Yes, describe the changes below.

Also, please provide **Suggested Title V Draft Permit language** for the proposed Title V Permit revision (including all applicable requirements associated with the permit revision and any associated monitoring /recordkeeping/ reporting requirements), OR attach a marked up pages of current Title V Permit. Please include appropriate citations (Permit or Consent Order number, condition number and/or rule citation (e.g. 45CSR§7-4.1)) for those requirements being added / revised.

**4. Active NSR Permits/Permit Determinations/Consent Orders Associated With This Permit Revision**

Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
R30-06500001-2019	05/07/2019	
	/ /	
	/ /	

**5. Inactive NSR Permits/Obsolete Permit or Consent Orders Conditions Associated With This Revision**

Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
	MM/DD/YYYY	
	/ /	
	/ /	

**6. Change in Potential Emissions**

Pollutant	Change in Potential Emissions (+ or -), TPY

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

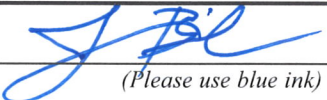
**7. Certification For Use Of Minor Modification Procedures (Required Only for Minor Modification Requests)**

*Note: This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete. The criteria for allowing the use of Minor Modification Procedures are as follows:*

- i. Proposed changes do not violate any applicable requirement;
- ii. Proposed changes do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- iii. Proposed changes do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient air quality impacts, or a visibility increment analysis;
- iv. Proposed changes do not seek to establish or change a permit term or condition for which there is no underlying applicable requirement and which permit or condition has been used to avoid an applicable requirement to which the source would otherwise be subject (synthetic minor). Such terms and conditions include, but are not limited to a federally enforceable emissions cap used to avoid classification as a modification under any provision of Title I or any alternative emissions limit approved pursuant to regulations promulgated under § 112(j)(5) of the Clean Air Act;
- v. Proposed changes do not involve preconstruction review under Title I of the Clean Air Act or 45CSR14 and 45CSR19;
- vi. Proposed changes are not required under any rule of the Director to be processed as a significant modification;

Notwithstanding subparagraph 45CSR§30-6.5.a.1.A. (items i through vi above), minor permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in rules of the Director which are approved by the U.S. EPA as a part of the State Implementation Plan under the Clean Air Act, or which may be otherwise provided for in the Title V operating permit issued under 45CSR30.

**Pursuant to 45CSR§30-6.5.a.2.C., the proposed modification contained herein meets the criteria for use of Minor permit modification procedures as set forth in Section 45CSR§30-6.5.a.1.A. The use of Minor permit modification procedures are hereby requested for processing of this application.**

(Signed): 	Date: <u>4</u> / <u>28</u> / <u>21</u>
(Please use blue ink)	(Please use blue ink)
Named (typed): <i>Jason Bish</i>	Title: <i>VP EHS</i>

**Note: Please check if the following included (if applicable):**

- Compliance Assurance Monitoring Form(s)
- Suggested Title V Draft Permit Language

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



**Attachment L**  
**Emission Unit Data Sheet**  
(NONMETALLIC MINERALS PROCESSING)

Control Device ID No. (must match List Form):

**Equipment Information**

1. Plant Type:					
<input type="checkbox"/> Hot-mix asphalt facility that reduces the size of nonmetallic minerals embedded in recycled asphalt pavement					
<input type="checkbox"/> Plant without crushers or grinding mills and containing a stand-alone screening operation					
<input type="checkbox"/> Sand and gravel plant			<input type="checkbox"/> Common clay plant		
<input checked="" type="checkbox"/> Crushed stone plant			<input type="checkbox"/> Pumice plant		
<input type="checkbox"/> Other,					specify
2. Plant Style: <input checked="" type="checkbox"/> Fixed Plant <input checked="" type="checkbox"/> Portable Plant			3. Plant Capacity: 450 tons/hr		
4. Underground mine: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			5. Storage: <input checked="" type="checkbox"/> Open <input type="checkbox"/> Enclosed		
6. Emission Facility Type	Equipment Type Used	ID Number of Emission Unit	Manufacturer	Model Number/Serial Number	Date of Manufacture
Conveyors	BC - Belt Conveyor	12 EU ID's	TBD	TBD	TBD
Crusher	Crusher	CRUSH1T	TBD	TBD	TBD
Secondary Crushers	Crusher	CRUSH2T	TBD	TBD	TBD
Tertiary Crushers	NA	NA	NA	NA	NA
Grinder	NA	NA	NA	NA	NA
Hoppers	NA	NA	NA	NA	NA
Rock Drills	NA	NA	NA	NA	NA
Screens	Screens	3 EU ID's	TBD	TBD	TBD
Enclosed Storage	NA	NA	NA	NA	NA
Other					
Other					
Other					
Emission Facility Type	Operation Rate		Annual Production Tons/year	Number of Units	Air Pollution Control Device Used
	Design Ton/hr	Design Ton/hr			
Conveyors	450	450	899,000	12	water
Crusher	300	300	899,000	1	water
Secondary Crushers	350	350	720,000	1	water
Tertiary Crushers	NA	NA	NA	NA	NA
Grinder	NA	NA	NA	NA	NA
Hoppers	NA	NA	NA	NA	NA
Rock Drills	NA	NA	NA	NA	NA
Screens	450	450	575,000	3	water
Enclosed Storage	NA	NA	NA	NA	NA
Other					
Other					
Other					

7. Provide a diagram and/or schematic that shows the proposed process of the operation or plant. The diagram and/or schematic is to show all sources, components and facets of the operation or plant in an understandable line sequence of the operation. The diagram should include all the equipment involved in the operation; such as conveyors, transfer points, stockpiles, crushers, facilities, vents, screens, truck dump bins, truck, barge and railcar loading and unloading, etc. Appropriate sizing and specifications of equipment should be included in the diagram. The diagram shall logical follow the entire process load-in to load-out.

8. Roads	Paved Miles of Road	Unpaved Miles of Road	Watered		Other Control (Specify)
			Miles	Frequency	
Plant Yard	NA	NA	NA	NA	NA
Access Roads	NA	NA	NA	NA	NA

9. Vehicle Type						
Vehicle Type	Mean Vehicle Speed in mph	Mean Vehicle Weight in Tons		Number of Wheels	Distance Traveled per Round Trip	
		Empty	Full		Paved Feet or Miles	Unpaved Feet or Miles
Raw Aggregate	NA	NA	NA	NA	NA	NA
Loaders	NA	NA	NA	NA	NA	NA
Product Trucks	NA	NA	NA	NA	NA	NA
Other						
Other						
Other						
Other						

10. Describe all proposed materials storage facilities associated with the **Emission Units** listed.  
 As the Berkeley Springs Plant mines sand already included in the Title 5 permit, the limestone ore is exposed. No additional trucking is anticipated from this project beyond what is currently represented within the Title V permit.

**Storage Activity**

<b>ID of Emission Unit</b>	STOCK1T				
<b>Type Storage</b>	OS - Open Stockpile				
<b>Material Stored</b>	Limestone				
<b>Typical Moisture Content (%)</b>	2-5%				
<b>Avg % of material passing through 200 mesh sieve</b>	<1%				
<b>Maximum Total Yearly Throughput in storage (tons)</b>	Stockpile size				
<b>Maximum Stockpile Base Area (ft<sup>2</sup>)</b>	7000				
<b>Maximum Stockpile height (ft)</b>	30				
<b>Dust control method applied to storage</b>					
<b>Method of material load-in to bin or stockpile</b>	SS - Stationary Conveyor-Stacker				
<b>Dust control method applied during load-in</b>	WS - Water Sprays				
<b>Method of material load-out to bin or stockpile</b>	FE - Front Endloader				
<b>Dust control method applied during load-out</b>	N - None				

<b>Storage piles</b>	<b>Estimated Annual Tons</b>	<b>Turnover Rate (Ton/Month)</b>	<b>Wetted as Piled</b>	<b>Number of Sides Enclosed</b>	<b>Other Dust Control</b>	<b>Loading Method (Loader, Conveyor) IN/OUT</b>
Coarse: over 1"	180,000	15,000	0	0	WS - Water Sprays	Loader
Fine: 1" to ¼"	540,000	45,000	0	0		Loader
¼" and less	NA	NA	NA	NA		NA
MFG. Sand	180,000	15,000	15,000	0	WS - Water Sprays	Loader
Other, specify						

### **Conveying and Transfer**

Describe the conveying system including transfer points associated with proposed Emission Units (crushers, etc...).

The conveying system will involve transfers from the crushing units to the downstream screening units, from the screening units to stacking conveyors or wet process and stacking conveyors. All transfer points will have water sprays except the stockpiles as they will have carrythrough of water from the spray system in the process.

Describe any methods of emission control to be used with these proposed conveying systems:

Water sprays will be used at all conveying transfer points except to the stockpiles as they will have carrythrough of water from the process.



### Crushing and Screening

ID of Emission Unit	CRUSH1T	CRUSH2T	SCREN1T	SCREN1T	SCREN1T	
Type Crusher or Screen	HM - Hammermill	HM - Hammermill	DD - Double-Deck Screen	DD - Double-Deck Screen	DD - Double-Deck Screen	
Material Sized						
<b>Material Sized Throughput:</b>						
Tons/hr	450	350	300	200	100	
Tons/yr	899,000	692,230	599,333	399,555	199,777	
Material sized from/to	30" x 4	4" x 3	3" x 1.5	1.5" x 1/2	1/2" x 200m	
Typical moisture content as crushed or screened (%)	2-5	2-5	2-5	2-5	2-5	
Dust control methods applied	WS - Water Sprays	WS - Water Sprays	WS - Water Sprays	WS - Water Sprays	WS - Water Sprays	
<b>Stack Parameters:</b>						
Height (ft)	NA	NA	NA	NA	NA	
Diameter (ft)	NA	NA	NA	NA	NA	
Volume (ACFM)	NA	NA	NA	NA	NA	
Temp (°F)	NA	NA	NA	NA	NA	
<b>Maximum operating schedule:</b>						
Hour/day	10/5	10/5	10/5	10/5	10/5	
Day/year	260	260	260	260	260	
Hour/year	1,997	1,997	1,997	1,997	1,997	
<b>Approximate Percentage of Operation from:</b>						
Jan – Mar	80	80	80	80	80	
April – June	80	80	80	80	80	
July – Sept	80	80	80	80	80	
Oct – Dec	80	80	80	80	80	
<b>Maximum Particulate Emissions:</b>						
LB/HR	0.222	0.259	0.333	0.333	0.259	
Ton/Year	0.972	1.134	1.459	1.459	1.134	

List emission sources with request information:

ID of Emission Unit	Type of Emission Unit and Use	Operating Schedule		Max. Amount of Stone Input to Emission (lb/hr)	Crushed or Screened From/To (size)	Date of Emission Unit was Manufacture
		Actual (hrs/yr)	Design (hrs/yr)			
CRUSH1T	Primary crusher	1,997	4,160	0.222	30" x 4	TBD
CRUSH2T	Secondary crusher	1,997	4,160	0.259	4" x 3	TBD
SCREN1T	Scalping Screen	1,997	4,160	0.333	3" x 1.5	TBD
SCREN2T	Screener	1,997	4,160	0.333	1.5" x 1/2	TBD
SCREN3T	Screener	1,997	4,160	0.259	1/2" x 200m	TBD
SCRENBC1T-7T	Belt conveyor	1,997	4,160	0.035	NA	TBD
STACKBC1T-2T	Stacking belt conveyor	1,997	4,160	0.006	NA	TBD

List emission sources with request information:

ID of Emission Unit	Maximum expected emissions from Emission Unit without Air Pollution Control Equipment				
	PM <sub>10</sub> (lbs/hr)	SO <sub>2</sub> (lbs/hr)	CO (lbs/hr)	NO <sub>x</sub> (lbs/hr)	VOC (lbs/hr)
CRUSH1T	0.222	NA	NA	NA	NA
CRUSH2T	0.259	NA	NA	NA	NA
SCREN1T	0.333	NA	NA	NA	NA
SCREN2T	0.333	NA	NA	NA	NA
SCREN3T	0.259	NA	NA	NA	NA
SCRENBC1T	0.013	NA	NA	NA	NA
SCRENBC2T	0.002	NA	NA	NA	NA

ID of Emission Unit	Maximum expected emissions from Emission Unit without Air Pollution Control Equipment				
	PM <sub>10</sub> (tons/yr)	SO <sub>2</sub> (tons/yr)	CO (tons/yr)	NO <sub>x</sub> (tons/yr)	VOC (tons/yr)
SCRENBC3T	0.003	NA	NA	NA	NA
SCRENBC4T	0.002	NA	NA	NA	NA
SCRENBC5T	0.001	NA	NA	NA	NA
SCRENBC6T	0.002	NA	NA	NA	NA
SCRENBC7T	0.010	NA	NA	NA	NA
STACK1T	0.002	NA	NA	NA	NA
STACK2T	0.003	NA	NA	NA	NA

Please fill out a separate Air Pollution Control Device Sheet for each Emission Unit equipped with an air pollution control system.

What type of stone will be quarried at this site?

Limestone

How will it be quarried?

- Sawing
- Blasting
- Other, Specify:

If blasting is checked, complete the following:

- Frequency of blasting: 2X Monthly
- What method of air pollution control will be employed during drilling and blasting?

Self-contained dust collector on drill unit during drilling. No dust control will be used during blasting.





Roberts, Daniel P &lt;daniel.p.roberts@wv.gov&gt;

---

**RE: WV DAQ Title V Permit Application Status for**

1 message

---

**Rigler, Andrew** <Rigler@ussilica.com>

Tue, Sep 28, 2021 at 11:38 AM

To: "Roberts, Daniel P" &lt;daniel.p.roberts@wv.gov&gt;, "Bish, Jason" &lt;jbish@ussilica.com&gt;

Cc: Carrie McCumbers &lt;carrie.mccumbers@wv.gov&gt;, "Mink, Stephanie R" &lt;stephanie.r.mink@wv.gov&gt;, "Andrews, Chase" &lt;andrews@ussilica.com&gt;

Mr. Roberts,

Please find attachments L & S for your review. If you require the original attachment S signed, please let me know and we will mail directly to you.

Regards,

Andy Rigler

US Silica

Berkeley Springs, WV

304-261-0254 (cell)

[rigler@ussilica.com](mailto:rigler@ussilica.com)

---

**From:** Roberts, Daniel P <daniel.p.roberts@wv.gov>**Sent:** Monday, September 27, 2021 4:21 PM**To:** Bish, Jason <jbish@ussilica.com>**Cc:** Rigler, Andrew <Rigler@ussilica.com>; Carrie McCumbers <carrie.mccumbers@wv.gov>; Mink, Stephanie R <stephanie.r.mink@wv.gov>**Subject:** Re: WV DAQ Title V Permit Application Status for

**CAUTION:** This email originated from outside of U.S. Silica. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Mr. Bish,

Your application was marked as a Title V minor modification, but you did not submit Attachment S. Please submit a completed and signed Attachment S as soon as possible.

Sincerely,

Dan Roberts

WV DEP

Division of Air Quality

Title V Permitting Section

(304) 926-0499 ext. 41902

[daniel.p.roberts@wv.gov](mailto:daniel.p.roberts@wv.gov)

On Mon, Sep 20, 2021 at 3:25 PM Mink, Stephanie R <[stephanie.r.mink@wv.gov](mailto:stephanie.r.mink@wv.gov)> wrote:

**RE: Application Status**  
**U.S. Silica Company**  
**Berkeley Springs Quarry**  
**Facility ID No. 065-00001**  
**Application No. R30-06500001-2019 (MM01)**

Dear Mr. xx,

Your application for a Title V Minor Modification Permit for U.S. Silica Company's Berkeley Springs Quarry was received by this Division on September 20, 2021, and was assigned to Dan Roberts.

Should you have any questions, please contact the assigned permit writer, Dan Roberts, at 304-926-0499, extension 41902, or [Daniel.P.Roberts@wv.gov](mailto:Daniel.P.Roberts@wv.gov).

--

**Stephanie Mink**

Secretary 2

West Virginia Department of Environmental Protection

Division of Air Quality, Title V Permitting

601 57<sup>th</sup> Street SE

Charleston, WV 25304

Phone: 304-926-0499 x41281

---

**2 attachments**



**Attachment L- EUD update.v3.doc**

438K



**Attachment S - Title V Revision Information signed.pdf**  
2176K



Roberts, Daniel P <daniel.p.roberts@wv.gov>

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## Notification for a Title V Minor Modification - U.S. Silica Company - Berkley Springs Quarry - Current Permit R30-06500001-2017

1 message

---

**Roberts, Daniel P** <daniel.p.roberts@wv.gov>

Mon, Sep 27, 2021 at 5:24 PM

To: jbish@ussilica.com, angelo.bianca@maryland.gov, RA-EPAIRPERMITNOTIFI@pa.gov, thomas.ballou@deq.virginia.gov, tamera.thompson@deq.virginia.gov, "Supplee, Gwendolyn" <Supplee.Gwendolyn@epa.gov>, Weinelt.Eva@epa.gov  
Cc: rigler@ussilica.com, "McCumbers, Carrie" <Carrie.McCumbers@wv.gov>

This email serves as notification that on September 20, 2021, the WV DAQ received an application for a Title V minor modification for U.S. Silica Company's Berkley Springs Quarry located near Berkley Springs, Morgan County, WV. The proposed change involves the construction of a limestone crushing and screening plant subject to 40 CFR 60 Subpart OOO. As a result of this modification, the facility's PTE will increase as follows: PM - 13.05 TPY, PM10 - 4.40 TPY, and PM2.5 - 0.12 TPY. If you have any questions or comments about this Title V permit revision application, please contact me at your earliest convenience.

Sincerely,

Dan Roberts

WV Department of Environmental Protection

Division of Air Quality

Title V Permitting Section

304-926-0499 ext. 41902

[Daniel.p.roberts@wv.gov](mailto:daniel.p.roberts@wv.gov)



Roberts, Daniel P &lt;daniel.p.roberts@wv.gov&gt;

---

**Re: WV DAQ Title V Permit Application Status for**

1 message

---

**Roberts, Daniel P** <daniel.p.roberts@wv.gov>

Mon, Sep 27, 2021 at 4:20 PM

To: JBish@ussilica.com

Cc: rigler@ussilica.com, Carrie McCumbers &lt;carrie.mccumbers@wv.gov&gt;, "Mink, Stephanie R" &lt;stephanie.r.mink@wv.gov&gt;

Mr. Bish,

Your application was marked as a Title V minor modification, but you did not submit Attachment S. Please submit a completed and signed Attachment S as soon as possible.

Sincerely,

Dan Roberts  
WV DEP  
Division of Air Quality  
Title V Permitting Section  
(304) 926-0499 ext. 41902  
[daniel.p.roberts@wv.gov](mailto:daniel.p.roberts@wv.gov)

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**U.S. Silica Company**  
**Berkeley Springs Quarry**  
**Facility ID No. 065-00001**  
**Application No. R30-06500001-2019 (MM01)**

Dear Mr. xx,

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--

**Stephanie Mink**

Secretary 2

West Virginia Department of Environmental Protection

Division of Air Quality, Title V Permitting

9/4/24, 2:11 PM

State of West Virginia Mail - Re: WV DAQ Title V Permit Application Status for

601 57<sup>th</sup> Street SE

Charleston, WV 25304

Phone: 304-926-0499 x41281



Roberts, Daniel P &lt;daniel.p.roberts@wv.gov&gt;

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Regards,

Andy Rigler

US Silica

Berkeley Springs, WV

304-261-0254 (cell)

[rigler@ussilica.com](mailto:rigler@ussilica.com)

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Mr. Bish,

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Sincerely,

Dan Roberts

WV DEP

Division of Air Quality

Title V Permitting Section

(304) 926-0499 ext. 41902

[daniel.p.roberts@wv.gov](mailto:daniel.p.roberts@wv.gov)

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**U.S. Silica Company**  
**Berkeley Springs Quarry**  
**Facility ID No. 065-00001**  
**Application No. R30-06500001-2019 (MM01)**

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Should you have any questions, please contact the assigned permit writer, Dan Roberts, at 304-926-0499, extension 41902, or [Daniel.P.Roberts@wv.gov](mailto:Daniel.P.Roberts@wv.gov).

--

**Stephanie Mink**

Secretary 2

West Virginia Department of Environmental Protection

Division of Air Quality, Title V Permitting

601 57<sup>th</sup> Street SE

Charleston, WV 25304

Phone: 304-926-0499 x41281

---

**2 attachments**



**Attachment L- EUD update.v3.doc**

438K





**Attachment S - Title V Revision Information signed.pdf**  
2176K



Roberts, Daniel P &lt;daniel.p.roberts@wv.gov&gt;

---

**WV DAQ Title V Permit Application Status for**

1 message

**Mink, Stephanie R** <stephanie.r.mink@wv.gov>

Mon, Sep 20, 2021 at 3:24 PM

To: JBish@ussilica.com, rigler@ussilica.com

Cc: Daniel P Roberts &lt;daniel.p.roberts@wv.gov&gt;, Carrie McCumbers &lt;carrie.mccumbers@wv.gov&gt;

**RE: Application Status****U.S. Silica Company****Berkeley Springs Quarry****Facility ID No. 065-00001****Application No. R30-06500001-2019 (MM01)**

Dear Mr. xx,

Your application for a Title V Minor Modification Permit for U.S. Silica Company's Berkeley Springs Quarry was received by this Division on September 20, 2021, and was assigned to Dan Roberts.

Should you have any questions, please contact the assigned permit writer, Dan Roberts, at 304-926-0499, extension 41902, or [Daniel.P.Roberts@wv.gov](mailto:Daniel.P.Roberts@wv.gov).

--

**Stephanie Mink**

Secretary 2

West Virginia Department of Environmental Protection

Division of Air Quality, Title V Permitting

601 57<sup>th</sup> Street SE

Charleston, WV 25304

Phone: 304-926-0499 x41281



Roberts, Daniel P <daniel.p.roberts@wv.gov>

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## US Silica minor mod

1 message

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**Mink, Stephanie R** <stephanie.r.mink@wv.gov>  
To: Daniel P Roberts <daniel.p.roberts@wv.gov>

Mon, Sep 20, 2021 at 3:24 PM

Here's the application and info sheet, I'm working on the confirmation email now.

Have a good evening!

--

### Stephanie Mink

Secretary 2

West Virginia Department of Environmental Protection

Division of Air Quality, Title V Permitting


601 57<sup>th</sup> Street SE


Charleston, WV 25304

Phone: 304-926-0499 x41281

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#### 2 attachments

 **US Silica R30-06500001-2019 (MM01) application 9-20-21.pdf**  
10905K

 **R30-06500001-2019 (MM01) info sheet.pdf**  
70K



September 3, 2021



RE: Construction Permit Application  
Berkeley Springs, WV  
U.S. Silica Company  
Title V Permit No. R-30-06500001-2014

Director,

Included in this document you will find the advertisement affidavit and applicable permit fees for the Construction Permit application for a Limestone Crushing and Screening operation at U.S. Silica Company in Berkeley Springs, WV. Currently, we do not feel it is necessary to include the Emissions Unit Data Sheet.

If you have any questions about the information submitted or if you would like to discuss this project, please do not hesitate to contact me at (304) 261-0254 or at [Rigler@ussilica.com](mailto:Rigler@ussilica.com).

Sincerely,

Andrew Rigler  
EHS Manager

U.S. Silica Company



## Table of Contents

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WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**DIVISION OF AIR QUALITY**

601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
(304) 926-0475  
[www.dep.wv.gov/daq](http://www.dep.wv.gov/daq)

**APPLICATION FOR NSR PERMIT  
AND  
TITLE V PERMIT REVISION  
(OPTIONAL)**

PLEASE CHECK ALL THAT APPLY TO **NSR (45CSR13)** (IF KNOWN):

- CONSTRUCTION**     **MODIFICATION**     **RELOCATION**  
 **CLASS I ADMINISTRATIVE UPDATE**     **TEMPORARY**  
 **CLASS II ADMINISTRATIVE UPDATE**     **AFTER-THE-FACT**

PLEASE CHECK TYPE OF **45CSR30 (TITLE V)** REVISION (IF ANY):

- ADMINISTRATIVE AMENDMENT**     **MINOR MODIFICATION**  
 **SIGNIFICANT MODIFICATION**

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS **ATTACHMENT S** TO THIS APPLICATION

**FOR TITLE V FACILITIES ONLY:** Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

**Section I. General**

1. Name of applicant (as registered with the WV Secretary of State's Office):  
U.S. Silica Company

2. Federal Employer ID No. (FEIN):  
23-0958670

3. Name of facility (if different from above):

4. The applicant is the:  
 **OWNER**     **OPERATOR**     **BOTH**

5A. Applicant's mailing address:  
2496 Hancock Road  
Berkeley Springs, WV 25411

5B. Facility's present physical address:  
2496 Hancock Road  
Berkeley Springs, WV 25411

6. **West Virginia 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 L.L.C./Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A**.

7. If applicant is a subsidiary corporation, please provide the name of parent corporation:

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

– If **YES**, please explain:    Proposed site is owned by U.S. Silica Company

– If **NO**, you are not eligible for a permit for this source.

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): Limestone crushing and screening plant

9. Type of plant or facility (stationary source) to be <b>constructed, modified, relocated, administratively updated</b> or <b>temporarily permitted</b> (e.g., coal preparation plant, primary crusher, etc.): Limestone crushing and screening plant		10. North American Industry Classification System (NAICS) code for the facility: 212322
11A. DAQ Plant ID No. (for existing facilities only): 065-00001	11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): Title V Permit No. R30-06500001-2014	
<b>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</b>		
12A. <ul style="list-style-type: none"> <li>For <b>Modifications, Administrative Updates</b> or <b>Temporary permits</b> at an existing facility, please provide directions to the <i>present location</i> of the facility from the nearest state road;</li> <li>For <b>Construction</b> or <b>Relocation permits</b>, please provide directions to the <i>proposed new site location</i> from the nearest state road. Include a <b>MAP</b> as <b>Attachment B</b>.</li> </ul> Off Route 522, three miles north of Berkeley Springs, WV.		
12.B. New site address (if applicable): NA	12C. Nearest city or town: Berkeley Springs, WV	12D. County: Morgan County
12.E. UTM Northing (KM): 4393.47	12F. UTM Easting (KM): 739.64	12G. UTM Zone: 17
13. Briefly describe the proposed change(s) at the facility: Renting a portable crusher and portable screener to process sandstone for a trial run for a potential new customer.		
14A. Provide the date of anticipated installation or change: 08/30/2018 <ul style="list-style-type: none"> <li>If this is an <b>After-The-Fact</b> permit application, provide the date upon which the proposed change did happen:</li> </ul>		14B. Date of anticipated Start-Up if a permit is granted: 09/30/2021
14C. Provide a <b>Schedule</b> of the planned <b>Installation of/Change</b> to and <b>Start-Up</b> of each of the units proposed in this permit application as <b>Attachment C</b> (if more than one unit is involved).		
15. Provide maximum projected <b>Operating Schedule</b> of activity/activities outlined in this application: Hours Per Day 24      Days Per Week 7      Weeks Per Year 52		
16. Is demolition or physical renovation at an existing facility involved? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
17. <b>Risk Management Plans.</b> If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see <a href="http://www.epa.gov/ceppo">www.epa.gov/ceppo</a> ), submit your <b>Risk Management Plan (RMP)</b> to U. S. EPA Region III.		
18. <b>Regulatory Discussion.</b> List all Federal and State air pollution control regulations that you believe are applicable to the proposed process ( <i>if known</i> ). A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance ( <i>if known</i> ). Provide this information as <b>Attachment D</b> .		
<b>Section II. Additional attachments and supporting documents.</b>		
19. Include a check payable to WVDEP – Division of Air Quality with the appropriate <b>application fee</b> (per 45CSR22 and 45CSR13).		

20. Include a <b>Table of Contents</b> as the first page of your application package.
21. Provide a <b>Plot Plan</b> , e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as <b>Attachment E</b> (Refer to <b>Plot Plan Guidance</b> ) . – Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).
22. Provide a <b>Detailed Process Flow Diagram(s)</b> showing each proposed or modified emissions unit, emission point and control device as <b>Attachment F</b> .
23. Provide a <b>Process Description</b> as <b>Attachment G</b> . – Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).
<b>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</b>
24. Provide <b>Material Safety Data Sheets (MSDS)</b> for all materials processed, used or produced as <b>Attachment H</b> . – For chemical processes, provide a MSDS for each compound emitted to the air.
25. Fill out the <b>Emission Units Table</b> and provide it as <b>Attachment I</b> .
26. Fill out the <b>Emission Points Data Summary Sheet (Table 1 and Table 2)</b> and provide it as <b>Attachment J</b> .
27. Fill out the <b>Fugitive Emissions Data Summary Sheet</b> and provide it as <b>Attachment K</b> .
28. Check all applicable <b>Emissions Unit Data Sheets</b> listed below: <input type="checkbox"/> Bulk Liquid Transfer Operations <input type="checkbox"/> Haul Road Emissions <input type="checkbox"/> Quarry <input type="checkbox"/> Chemical Processes <input type="checkbox"/> Hot Mix Asphalt Plant <input checked="" type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities <input type="checkbox"/> Concrete Batch Plant <input type="checkbox"/> Incinerator <input type="checkbox"/> Grey Iron and Steel Foundry <input type="checkbox"/> Indirect Heat Exchanger <input type="checkbox"/> Storage Tanks <input type="checkbox"/> General Emission Unit, specify
Fill out and provide the <b>Emissions Unit Data Sheet(s)</b> as <b>Attachment L</b> .
29. Check all applicable <b>Air Pollution Control Device Sheets</b> listed below: <input type="checkbox"/> Absorption Systems <input type="checkbox"/> Baghouse <input type="checkbox"/> Flare <input type="checkbox"/> Adsorption Systems <input type="checkbox"/> Condenser <input type="checkbox"/> Mechanical Collector <input type="checkbox"/> Afterburner <input type="checkbox"/> Electrostatic Precipitator <input type="checkbox"/> Wet Collecting System <input type="checkbox"/> Other Collectors, specify:
Fill out and provide the <b>Air Pollution Control Device Sheet(s)</b> as <b>Attachment M</b> .
30. Provide all <b>Supporting Emissions Calculations</b> as <b>Attachment N</b> , or attach the calculations directly to the forms listed in Items 28 through 31.
31. <b>Monitoring, Recordkeeping, Reporting and Testing Plans.</b> Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as <b>Attachment O</b> . ➤ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.
32. <b>Public Notice.</b> At the time that the application is submitted, place a <b>Class I Legal Advertisement</b> in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and <b>Example Legal Advertisement</b> for details). Please submit the <b>Affidavit of Publication</b> as <b>Attachment P</b> immediately upon receipt.
33. <b>Business Confidentiality Claims.</b> Does this application include confidential information (per 45CSR31)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO ➤ If <b>YES</b> , identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's " <b>Precautionary Notice – Claims of Confidentiality</b> " guidance found in the <b>General Instructions</b> as <b>Attachment Q</b> .

**Section III. Certification of Information**



34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

- Authority of Corporation or Other Business Entity
  Authority of Partnership  
 Authority of Governmental Agency
  Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R**.

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

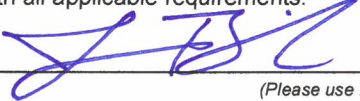
35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

**Certification of Truth, Accuracy, and Completeness**

I, the undersigned  **Responsible Official** /  **Authorized Representative**, hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

**Compliance Certification**

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE  \_\_\_\_\_  
 (Please use blue ink)

DATE: 9/10/21  
 (Please use blue ink)

35B. Printed name of signee: Jason Bish

35C. Title: VP - EHS

35D. E-mail: JBish@ussilica.com

35E. Phone: 314-220-7198

35F. FAX: N/A

36A. Printed name of contact person (if different from above): Andrew Rigler

36B. Title: EHS Manager

36C. E-mail: rigler@ussilica.com

36D. Phone: 304-261-0254

36E. FAX: N/A

**PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Attachment A: Business Certificate               | <input checked="" type="checkbox"/> Attachment K: Fugitive Emissions Data Summary Sheet |
| <input checked="" type="checkbox"/> Attachment B: Map(s)                             | <input checked="" type="checkbox"/> Attachment L: Emissions Unit Data Sheet(s)          |
| <input type="checkbox"/> Attachment C: Installation and Start Up Schedule            | <input type="checkbox"/> Attachment M: Air Pollution Control Device Sheet(s)            |
| <input checked="" type="checkbox"/> Attachment D: Regulatory Discussion              | <input checked="" type="checkbox"/> Attachment N: Supporting Emissions Calculations     |
| <input type="checkbox"/> Attachment E: Plot Plan                                     | <input type="checkbox"/> Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans |
| <input checked="" type="checkbox"/> Attachment F: Detailed Process Flow Diagram(s)   | <input checked="" type="checkbox"/> Attachment P: Public Notice                         |
| <input checked="" type="checkbox"/> Attachment G: Process Description                | <input type="checkbox"/> Attachment Q: Business Confidential Claims                     |
| <input checked="" type="checkbox"/> Attachment H: Material Safety Data Sheets (MSDS) | <input type="checkbox"/> Attachment R: Authority Forms                                  |
| <input checked="" type="checkbox"/> Attachment I: Emission Units Table               | <input type="checkbox"/> Attachment S: Title V Permit Revision Information              |
| <input checked="" type="checkbox"/> Attachment J: Emission Points Data Summary Sheet | <input checked="" type="checkbox"/> Application Fee                                     |

*Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.*

**FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:**

- Forward 1 copy of the application to the Title V Permitting Group and:*
- For Title V Administrative Amendments:*
  - NSR permit writer should notify Title V permit writer of draft permit,*
- For Title V Minor Modifications:*
  - Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,*
  - NSR permit writer should notify Title V permit writer of draft permit.*
- For Title V Significant Modifications processed in parallel with NSR Permit revision:*
  - NSR permit writer should notify a Title V permit writer of draft permit,*
  - Public notice should reference both 45CSR13 and Title V permits,*
  - EPA has 45 day review period of a draft permit.*

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

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

ISSUED TO:  
**U S SILICA COMPANY  
8490 PROGRESS DR 300  
FREDERICK, MD 21701-4996**

BUSINESS REGISTRATION ACCOUNT NUMBER: **1013-3327**

This certificate is issued on: **06/29/2011**

*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.**

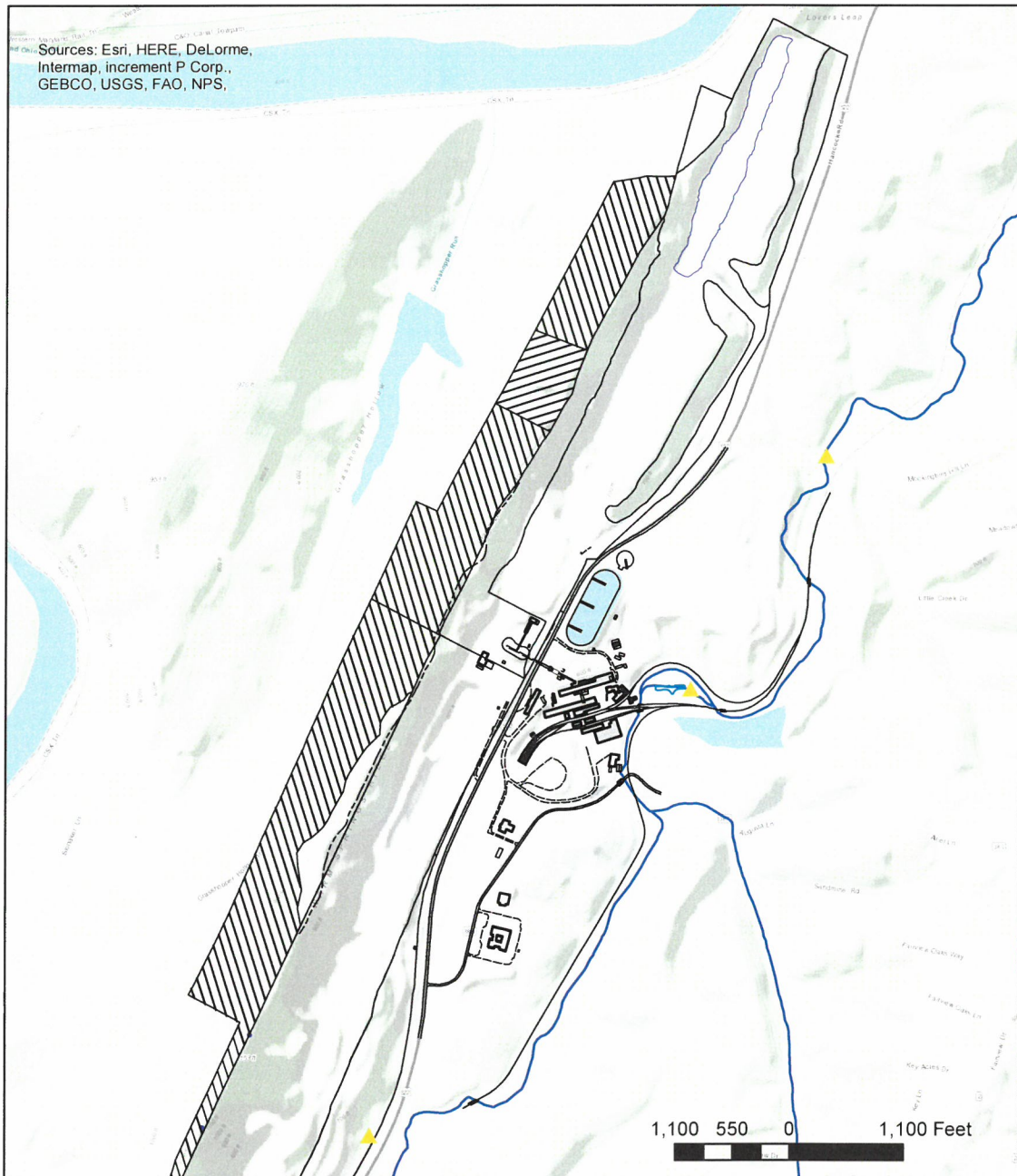
This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

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.

# U.S. Silica Location Map

## Berkeley Springs Plant





### ***Regulatory Discussion***

This section outlines the State and Federal air quality regulations that could be reasonably expected to apply to construct a standalone Limestone Crushing and Screening plant to be included into the air operating permit at the Berkeley Springs Facility. The discussions below provide an applicability determination for each regulation based on activities conducted at the site and the emissions of regulated air pollutants.

#### **WEST VIRGINIA STATE AIR REGULATIONS**

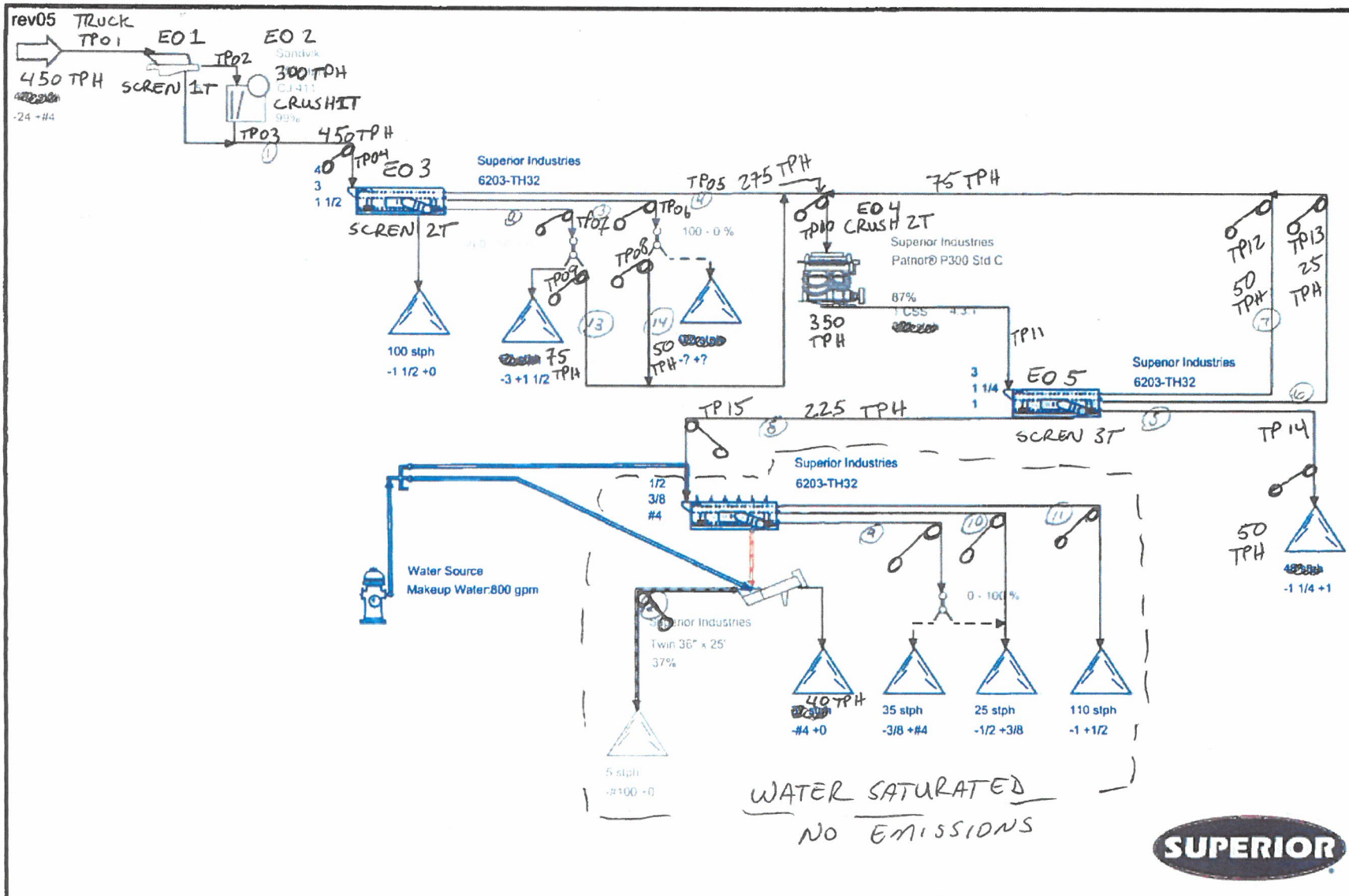
*45 CSR 13- Permits For Construction, Modification, Relocation And Operation Of Stationary Sources Of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission To Commence Construction, And Procedures For Evaluation.*

Due to the proposed changes being experimental, U.S. Silica Company has completed and retained this Temporary Permit Application to demonstrate that the associated increase in the facility Potential to Emit (PTE) will amount to 6.506 TPY of the regulated criteria pollutant Particulate Matter<sub>10</sub> (PM<sub>10</sub>).

#### **FEDERAL REGULATIONS**

*40 CFR 60 Subpart OOO- Standards for performance for Nonmetallic Mineral Processing Plants.*

**40 CFR 60.670.c.2:** Due to the crushing plant operating at a throughput rate of 450 TPH, U.S. Silica will adhere to all applicable monitoring, testing, and reporting regulatory requirements under NSPS standards.



Calculation results may differ due to variations in operating conditions and application of crushing and screening equipment. This information does not constitute an express or implied warranty, but shows results of calculations based on information provided by customers or equipment manufacturers. Use this information for estimating purposes only.  
 All calculations performed by AggFlow. <http://www.AggFlow.com>

Doug Lambert - Superior Industries  
 210505-1500 6203/36 Twin Wash Plant  
 Doug Lambert  
 Plant Stage #1:  
 Project #: 116572 Revision #: 554776 Date: August/5/2021



***Process Description***

This construction permit application has been completed for U.S. Silica Company and addresses a need for limestone crushing and sizing at the Berkeley Springs Plant. The construction permit application details the use of a limestone crushing and screening plant that will utilize currently stockpiled limestone in the existing quarry at U.S. Silica's Berkeley Springs facility.

The existing stockpiled crushed rock will be transported via front end loader onto the crusher plant at a rate of 450 TPH. The crushing plant with water sprays for control is equipped with a conveying system, screening system, secondary crusher and stockpiling conveyors. Once the material passes through the screens, the oversized material will transfer via conveyor belt to a secondary crusher and back to a screen for sorting into stockpiles of finished product or to a wash plant that will use water to saturate the material for sorting and stockpiling that will be picked by the customer. The undersized material will transfer via conveyor belt to a small pile that will be transported via front-end loader back to the existing stockpile of limestone. A process flow diagram is included as Attachment F.

**Attachment I**  
**Emission Units Table**  
(includes all emission units and air pollution control devices  
that will be part of this permit application review, regardless of permitting status)

Emission Unit ID <sup>1</sup>	Emission Point ID <sup>2</sup>	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type <sup>3</sup> and Date of Change	Control Device <sup>4</sup>
STOCK1T	FP01	Stockpile	2021	40,000 tons	New	FE
CRUSH1T	E02	Primary Crusher	2021	300 TPH	New	FE
CRUSH2T	E04	Secondary Cone Crusher	2021	350 TPH	New	FE
SCREN1T	E01	Scalping Screener	2021	450 TPH	New	FE
SCREN2T	E03	Screener	2021	450 TPH	New	FE
SCREN3T	E05	Screener	2021	350 TPH	New	FE
TRUCK1T	TP01	Front End Loader Feeding Scalping Screen	2021	450 TPH	New	FE
FEEDER1T	TP02	Screen Feeding Crusher	2021	300 TPH	New	FE
CRUSH1T	TP03	Crusher onto Belt Conveyor	2021	300 TPH	New	FE
SCREN1T	TP04	Belt Conveyor Feeding Screener	2021	450 TPH	New	FE
SCRENBC1T	TP05	Conveyor from Screener	2021	275 TPH	New	FE
SCRENBC2T	TP06	Conveyor from Screener	2021	50 TPH	New	FE
SCRENBC3T	TP07	Conveyor from Screener	2021	75 TPH	New	FE
STACKBC1T	TP08	Conveyor belt transfer point	2021	50 TPH	New	FE
STACKBC2T	TP09	Conveyor belt transfer point	2021	75 TPH	New	FE
CRUSH2T	TP010	Conveyor belt Feeding Crusher	2021	350 TPH	New	FE
CRUSHSCR1T	TP011	Crusher Feeding Screener	2021	350 TPH	New	FE
SCRENBC4T	TP012	Conveyor from Screener	2021	50 TPH	New	FE
SCRENBC5T	TP013	Conveyor from Screener	2021	25 TPH	New	FE
SCRENBC6T	TP014	Conveyor from Screener	2021	50 TPH	New	FE
SCRENBC7T	TP015	Conveyor from Screener	2021	225 TPH	New	FE

<sup>1</sup> For Emission Units (or Sources) use the following numbering system: 1S, 2S, 3S,... or other appropriate designation.

<sup>2</sup> For Emission Points use the following numbering system: 1E, 2E, 3E, ... or other appropriate designation.

<sup>3</sup> New, modification, removal

<sup>4</sup> For Control Devices use the following numbering system: 1C, 2C, 3C,... or other appropriate designation.



**Attachment J  
EMISSION POINTS DATA SUMMARY SHEET**

Table 1: Emissions Data															
Emission Point ID No. <i>(Must match Emission Units Table &amp; Plot Plan)</i>	Emission Point Type <sup>1</sup>	Emission Unit Vented Through This Point <i>(Must match Emission Units Table &amp; Plot Plan)</i>		Air Pollution Control Device <i>(Must match Emission Units Table &amp; Plot Plan)</i>		Vent Time for Emission Unit <i>(chemical processes only)</i>		All Regulated Pollutants - Chemical Name/CAS <sup>3</sup>  <i>(Speciate VOCs &amp; HAPS)</i>	Maximum Potential Uncontrolled Emissions <sup>4</sup>		Maximum Potential Controlled Emissions <sup>5</sup>		Emission Form or Phase  <i>(At exit conditions, Solid, Liquid or Gas/Vapor)</i>	Est. Method Used <sup>6</sup>	Emission Concentration <sup>7</sup> <i>(ppmv or mg/m<sup>4</sup>)</i>
		ID No.	Source	ID No.	Device Type	Short Term <sup>2</sup>	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
E01	Scalping Screen				N/A			PM10	0.333	1.459			Solid	EE	
E02	Primary Crusher				N/A			PM10	0.222	0.972			Solid	EE	
E03	Screener				N/A			PM10	0.333	1.459			Solid	EE	
E04	Secondary Crusher				N/A			PM10	0.259	1.134			Solid	EE	
E05	Screener				N/A			PM10	0.259	1.134					
TP01	Front End Loader feeding Scalping Screen				N/A			PM10	0.007	0.032			Solid	EE	

TP02	Scalping Screen Feeding Crusher				N/A			PM10			Solid	EE	
									0.014	0.060			
TP03	Crusher feeding belt conveyer				N/A			PM10			Solid	EE	
									0.014	0.060			
TP04	Belt Conveyer Feeding Screener				N/A			PM10			Solid	EE	
									0.021	0.091			
TP05	Conveyor From Screener				N/A			PM10			Solid	EE	
									0.013	0.055			
TP06	Conveyor From Screener				N/A			PM10			Solid	EE	
									0.002	0.010			
TP07	Conveyor From Screener				N/A			PM10			Solid	EE	
									0.003	0.015			
TP08	Conveyor belt transfer point				N/A			PM10			Solid	EE	
									0.002	0.010			
TP09	Conveyor belt transfer point				N/A			PM10			Solid	EE	
									0.003	0.015			

TP010	Conveyor belt Feeding Crusher				N/A			PM10			Solid	EE	
									0.016	0.071			
TP011	Crusher Feeding Screener				N/A			PM10			Solid	EE	
									0.016	0.071			
TP012	Conveyor belt From Screener				N/A			PM10			Solid	EE	
									0.002	0.010			
TP013	Conveyor belt From Screener				N/A			PM10			Solid	EE	
									0.001	0.005			
TP014	Conveyor belt From Screener				N/A			PM10			Solid	EE	
									0.002	0.010			
TP015	Conveyor belt From Screener				N/A			PM10			Solid	EE	
									0.010	0.045			

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

<sup>1</sup> Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

<sup>2</sup> Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

<sup>3</sup> List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. **LIST** Acids, CO, CS<sub>2</sub>, VOCs, H<sub>2</sub>S, Inorganics, Lead, Organics, O<sub>3</sub>, NO, NO<sub>2</sub>, SO<sub>2</sub>, SO<sub>3</sub>, all applicable Greenhouse Gases (including CO<sub>2</sub> and methane), etc. **DO NOT LIST** H<sub>2</sub>, H<sub>2</sub>O, N<sub>2</sub>, O<sub>2</sub>, and Noble Gases.

<sup>4</sup> Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

<sup>5</sup> Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

<sup>6</sup> Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

<sup>7</sup> Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m<sup>3</sup>) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO<sub>2</sub>, use units of ppmv (See 45CSR10).

**Attachment J  
EMISSION POINTS DATA SUMMARY SHEET**

Table 2: Release Parameter Data								
Emission Point ID No. <i>(Must match Emission Units Table)</i>	Inner Diameter (ft.)	Exit Gas			Emission Point Elevation (ft)		UTM Coordinates (km)	
		Temp. (°F)	Volumetric Flow <sup>1</sup> (acfm) <i>at operating conditions</i>	Velocity (fps)	Ground Level <i>(Height above mean sea level)</i>	Stack Height <sup>2</sup> <i>(Release height of emissions above ground level)</i>	Northing	Easting
E01	N/A	N/A	N/A	N/A	250	N/A		
E02	N/A	N/A	N/A	N/A	300	N/A		
E03	N/A	N/A	N/A	N/A	200	N/A		
E04	N/A	N/A	N/A	N/A	500	N/A		
TP01	N/A	N/A	N/A	N/A	350	N/A		
TP02	N/A	N/A	N/A	N/A	350	N/A		
TP03	N/A	N/A	N/A	N/A	250	N/A		
TP04	N/A	N/A	N/A	N/A	150	N/A		
TP05	N/A	N/A	N/A	N/A	300	N/A		
TP06	N/A	N/A	N/A	N/A	100	N/A		
TP07	N/A	N/A	N/A	N/A	300	N/A		
TP08	N/A	N/A	N/A	N/A	100	N/A		
TP09	N/A	N/A	N/A	N/A	100	N/A		
TP010	N/A	N/A	N/A	N/A	150	N/A		
TP011	N/A	N/A	N/A	N/A	100	N/A		
TP012	N/A	N/A	N/A	N/A	100	N/A		
TP013	N/A	N/A	N/A	N/A	150	N/A		

TP014	N/A	N/A	N/A	N/A	300	N/A		
TP015	N/A	N/A	N/A	N/A	300	N/A		

<sup>1</sup> Give at operating conditions. Include inerts.

<sup>2</sup> Release height of emissions above ground level.

## Attachment K

### FUGITIVE EMISSIONS DATA SUMMARY SHEET

The FUGITIVE EMISSIONS SUMMARY SHEET provides a summation of fugitive emissions. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. Note that uncaptured process emissions are not typically considered to be fugitive, and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET.

Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions).

APPLICATION FORMS CHECKLIST - FUGITIVE EMISSIONS
1.) Will there be haul road activities? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET.
2.) Will there be Storage Piles? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET.
3.) Will there be Liquid Loading/Unloading Operations? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.
4.) Will there be emissions of air pollutants from Wastewater Treatment Evaporation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
5.) Will there be Equipment Leaks (e.g. leaks from pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, cooling towers, etc.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the LEAK SOURCE DATA SHEET section of the CHEMICAL PROCESSES EMISSIONS UNIT DATA SHEET.
6.) Will there be General Clean-up VOC Operations? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
7.) Will there be any other activities that generate fugitive emissions? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET or the most appropriate form.
If you answered "NO" to all of the items above, it is not necessary to complete the following table, "Fugitive Emissions Summary."

FUGITIVE EMISSIONS SUMMARY	All Regulated Pollutants - Chemical Name/CAS <sup>1</sup>	Maximum Potential Uncontrolled Emissions <sup>2</sup>		Maximum Potential Controlled Emissions <sup>3</sup>		Est. Method Used <sup>4</sup>
		lb/hr	ton/yr	lb/hr	ton/yr	
Haul Road/Road Dust Emissions Paved Haul Roads						
Unpaved Haul Roads						
Storage Pile Emissions	PM10	0.003	0.014	N/A	N/A	EE
Loading/Unloading Operations						
Wastewater Treatment Evaporation & Operations						
Equipment Leaks		Does not apply		Does not apply		
General Clean-up VOC Emissions						
Other						

<sup>1</sup> List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS<sub>2</sub>, VOCs, H<sub>2</sub>S, Inorganics, Lead, Organics, O<sub>3</sub>, NO, NO<sub>2</sub>, SO<sub>2</sub>, SO<sub>3</sub>, all applicable Greenhouse Gases (including CO<sub>2</sub> and methane), etc. DO NOT LIST H<sub>2</sub>, H<sub>2</sub>O, N<sub>2</sub>, O<sub>2</sub>, and Noble Gases.

<sup>2</sup> Give rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

<sup>3</sup> Give rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

<sup>4</sup> Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

Crushing	PM		PM-10		PM-2.5	
	Controlled		Controlled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
CRUSH1T- E02	0.66	2.8908	0.222	0.97236	0	0
CRUSH2T- E04	0.77	3.3726	0.259	1.13442	0	0

Crushing - controlled* (30502002)	PM	PM10	PM2.5
	0.0022	0.00074	0

\* AP-42 Emission Factor for Crushed Stone Processing Operations with control through water sprays



Screening	PM		PM-10		PM-2.5	
	Controlled		Controlled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
SCREN1T- E01	0.99	4.3362	0.333	1.45854	0	0
SCREN2T- E03	0.99	4.3362	0.333	1.45854	0	0
SCREN3T- E05	0.77	3.3726	0.259	1.13442	0	0

Screening - controlled*	PM	PM10	PM2.5
(30502021)	0.0022	0.00074	0

\* AP-42 Emission Factor for Crushed Stone Processing Operations with control through water sprays

Transfer Points Emissions	PM		PM-10		PM-2.5	
	Controlled		Controlled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
TRUCK1T- TP01 (1)	0.007	0.032	0.007	0.032	0.007	0.032
FEEDER1T- TP02 (2)	0.042	0.184	0.014	0.060	0.004	0.017
CRUSH1T- TP03 (2)	0.042	0.184	0.014	0.060	0.004	0.017
SCREN1T- TP04 (2)	0.063	0.276	0.021	0.091	0.006	0.026
SCRENBC1T- TP05 (2)	0.039	0.169	0.013	0.055	0.004	0.016
SCRENBC2T- TP06 (2)	0.007	0.031	0.002	0.010	0.001	0.003
SCRENBC3T- TP07 (2)	0.011	0.046	0.003	0.015	0.001	0.004
STACKBC1T- TP08 (2)	0.007	0.031	0.002	0.010	0.001	0.003
STACKBC2T- TP09 (2)	0.011	0.046	0.003	0.015	0.001	0.004
CRUSH2T- TP10 (2)	0.049	0.215	0.016	0.071	0.005	0.020
CRUSHSCR1T- TP11 (2)	0.049	0.215	0.016	0.071	0.005	0.020
SCRENBC4T- TP12 (2)	0.007	0.031	0.002	0.010	0.001	0.003
SCRENBC5T- TP13 (2)	0.004	0.015	0.001	0.005	0.000	0.001
SCRENBC6T- TP14 (2)	0.007	0.031	0.002	0.010	0.001	0.003
SCRENBC7T- TP15 (2)	0.032	0.138	0.010	0.045	0.003	0.013
Total	0.217	0.951	0.0762	0.334	0.027	0.117

1.

Truck Unloading Fragmented Stone (30502031)			
	PM	PM10	PM2.5
Controlled	0.000016	0.000016	0.000016

LB/TON

2.

Miscellaneous Operations: Convey/Handling (30502006)			
	PM	PM10	PM2.5
Controlled	0.00014	0.000046	0.000013

LB/TON

Wind Erosion Stockpile Emissions	PM				PM-10			
	Uncontrolled		Uncontrolled		Uncontrolled		Uncontrolled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
STOCK1T- FP01	0.007	0.029	0.003	0.014	0.000	0.002		

**Material Storage Pile Wind Erosion Annual Emissions**

Emission Unit ID	Source Description	Size (acres)	Emission Control Method	Control Efficiency	Days in Reporting Period	Emission Factor <sup>a</sup>			Unit	
						PM	PM <sub>10</sub>	PM <sub>2.5</sub>		
STOCK1T		0	0.16	0	0.00	365	0.16	0.08	0.01	lb/day

A. USEPA, 1992 (Fugitive Dust Background and Technical Information Document for Best Available Control Measures, Section 2.3.1.3.3, Wind Emissions from Continuously Active Piles). USEPA, 2006 13.2.5 for k factors:

$$EF \text{ (lb/day/acre)} = k \times 1.7 \times (s/1.5) \times ((365 - p)/235) \times (f/15)^2 \times (1 - \% \text{ Control Efficiency})$$

B. Total PM assumed to be equal to PM < 30 µm

C. Total days of precipitation greater than or equal to 0.01 inch from U.S. EPA, AP-42 Section 13.2.2 - Unpaved Roads (November 2006), Figure 13.2.2-1.

Days of precipitation greater than or equal to 0.01 inch (p)

112

D. Time (%) that unobstructed wind speed exceeds 5.4 m/s at mean pile height from climatological data at Wheeling, WV from 2012-2014.

Time (%) that unobstructed wind speed exceeds 5.4 m/s at mean pile height (f)

10

E. Silt content from U.S. EPA, AP-42 Section 13.2.4 - Aggregate Handling and Storage Piles (November 2006), Table 12.2.4-1

Silt Content (%), (s)

1.2

F. Particle Size multiplier from U.S. EPA, AP-42 Section 13.2.5 - Industrial Wind Erosion (November 2006), Table after Equation 2.

Particle Size multiplier (k)  
 1 (for PM < 30 µm)  
 0.5 (for PM < 10 µm)  
 0.075 (for PM < 2.5 µm)

	PM		PM-10		PM-2.5	
	Controlled LB/HR	TPY	Controlled LB/HR	TPY	Controlled LB/HR	TPY
STOCK1T- FP01	0.007	0.029	0.003	0.014	0.000	0.002
CRUSH1T- E02	0.66	2.8908	0.222	0.97236	0	0
CRUSH2T- E04	0.77	3.3726	0.259	1.13442	0	0
SCREN1T- E01	0.99	4.3362	0.333	1.45854	0	0
SCREN2T- E03	0.99	4.3362	0.333	1.45854	0	0
SCREN3T- E05	0.77	3.3726	0.259	1.13442	0	0
TRUCK1T- TP01 (1)	0.007	0.032	0.007	0.032	0.007	0.032
FEEDER1T- TP02 (2)	0.042	0.184	0.014	0.060	0.004	0.017
CRUSH1T- TP03 (2)	0.042	0.184	0.014	0.060	0.004	0.017
SCREN1T- TP04 (2)	0.063	0.276	0.021	0.091	0.006	0.026
SCRENBC1T- TP05 (2)	0.039	0.169	0.013	0.055	0.004	0.016
SCRENBC2T- TP06 (2)	0.007	0.031	0.002	0.010	0.001	0.003
SCRENBC3T- TP07 (2)	0.011	0.046	0.003	0.015	0.001	0.004
STACKBC1T- TP08 (2)	0.007	0.031	0.002	0.010	0.001	0.003
STACKBC2T- TP09 (2)	0.011	0.046	0.003	0.015	0.001	0.004
CRUSH2T- TP10 (2)	0.049	0.215	0.016	0.071	0.005	0.020
CRUSHSCR1T- TP11 (2)	0.049	0.215	0.016	0.071	0.005	0.020
SCRENBC4T- TP12 (2)	0.007	0.031	0.002	0.010	0.001	0.003
SCRENBC5T- TP13 (2)	0.004	0.015	0.001	0.005	0.000	0.001
SCRENBC6T- TP14 (2)	0.007	0.031	0.002	0.010	0.001	0.003
SCRENBC7T- TP15 (2)	0.032	0.138	0.010	0.045	0.003	0.013
Total	4.404	19.288	1.485	6.506	0.027	0.119

**AIR QUALITY PERMIT NOTICE**  
**Notice of Application**

Notice is given that U.S. Silica Company has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Construction Permit for a Portable Limestone crushing and screening operation located on 2496 Hancock Road near Berkeley Springs in Morgan County, West Virginia. The latitude and longitude coordinates are: 78° 13' 15.0000" Longitude 39° 38' 28.0000" (Coordinated from USGS Topographic Map)

The applicant estimates the increased potential to discharge the following Regulated Air Pollutants will be: PM: 13.048, PM10: 4.403, PM2.5: 0.115.

Startup of operation is planned to begin on or about the 31st day of October 2021. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice. Written comments will also be received via email at [DEPAirQualityPermitting@WV.gov](mailto:DEPAirQualityPermitting@WV.gov).

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 41281, during normal business hours.

Dated this the 7th day of September 2021.

By: U.S. Silica Company  
Jason Bish  
Vice President of EHS  
2496 Hancock Road  
Berkeley Springs, WV 25411  
9-8-1tm

WV SEAL image  
removed

**Permit / Application Information Sheet**  
**Division of Environmental Protection**  
**West Virginia Office of Air Quality**

<b>Company:</b>	U.S. SILICA COMPANY	<b>Facility:</b>	Berkeley Springs Quarry		
<b>Region:</b>	10	<b>Plant ID:</b>	065-00001	<b>Application #:</b>	R30-06500001-2019 (MM01)
<b>Engineer:</b>	Roberts, Dan		<b>Category:</b>	Sand&Grav	
<b>Physical Address:</b>	2496 Hancock Road Berkeley Springs WV 25411		<b>SIC:</b> [1446] MINING AND QUARRYING OF NONMETALLIC MINERALS - INDUSTRIAL SAND <b>NAICS:</b> [212322] Industrial Sand Mining		
<b>County:</b>	Morgan				
<b>Other Parties:</b>	ENV_MGR - Rigler, Andrew 304-261-0254				

<b>Information Needed for Database and AIRS</b>
1. Need valid physical West Virginia address with zip

**Regulated Pollutants**

<b>Summary from this Permit R30-06500001-2019 (MM01)</b>		
<b>Air Programs</b>	<b>Applicable Regulations</b>	
<b>Fee Program</b>	<b>Fee</b>	<b>Application Type</b>
	\$0.00	MINOR MOD

**Notes from Database**

**Activity Dates**

APPLICATION RECIEVED	09/20/2021
ASSIGNED DATE	09/20/2021

**NON-CONFIDENTIAL**

Please note, this information sheet is not a substitute for file research and is limited to data entered into the AIRTRAX database.

Company ID: 065-00001  
Company: U.S. SILICA COMPANY  
Printed: 09/20/2021  
Engineer: Roberts, Dan



Roberts, Daniel P &lt;daniel.p.roberts@wv.gov&gt;

---

**Re: US Silica 065-00001 Construction Application**

1 message

---

**McCumbers, Carrie** <carrie.mccumbers@wv.gov>  
To: "Roberts, Daniel P" <daniel.p.roberts@wv.gov>

Mon, Sep 20, 2021 at 2:27 PM

Thanks!

On Mon, Sep 20, 2021 at 2:26 PM Roberts, Daniel P &lt;daniel.p.roberts@wv.gov&gt; wrote:

Carrie,

Hey. I will check with them and will keep you posted.

Dan

On Mon, Sep 20, 2021 at 1:50 PM McCumbers, Carrie &lt;carrie.mccumbers@wv.gov&gt; wrote:

I just assigned this minor modification to you. They marked this as a minor modification, but did not submit an Attachment S. Will you please contact the company and let them know that we need a completed and signed Attachment S?

Thanks,  
Carrie

----- Forwarded message -----

From: **McCumbers, Carrie** <carrie.mccumbers@wv.gov>  
Date: Mon, Sep 20, 2021 at 1:48 PM  
Subject: Re: US Silica 065-00001 Construction Application  
To: Mink, Stephanie R <stephanie.r.mink@wv.gov>  
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>

Stephanie,

Please assign the minor modification to Dan as R30-06500001-2019 (MM01).

Thanks,  
Carrie

On Mon, Sep 20, 2021 at 1:24 PM Mink, Stephanie R &lt;stephanie.r.mink@wv.gov&gt; wrote:

Bev/Nicole:

We received the attached application in the mail today along with a check in the sum of \$2,000.00. They submitted an original with three copies; I will leave the packet of hard copies on Nicole's desk. If you don't mind, please cc me when you assign the permit and I will make the appropriate note on the check and deliver it to Accounts Receivable this afternoon.

Carrie:  
The company marked that there was a minor modification but did not include an attachment S

Thank you

--

**Stephanie Mink**

Secretary 2

West Virginia Department of Environmental Protection

Division of Air Quality, Title V Permitting

9/4/24, 2:08 PM

State of West Virginia Mail - Re: US Silica 065-00001 Construction Application

601 57<sup>th</sup> Street SE

Charleston, WV 25304

Phone: 304-926-0499 x41281





September 3, 2021



RE: Construction Permit Application  
Berkeley Springs, WV  
U.S. Silica Company  
Title V Permit No. R-30-06500001-2014

Director,

Included in this document you will find the advertisement affidavit and applicable permit fees for the Construction Permit application for a Limestone Crushing and Screening operation at U.S. Silica Company in Berkeley Springs, WV. Currently, we do not feel it is necessary to include the Emissions Unit Data Sheet.

If you have any questions about the information submitted or if you would like to discuss this project, please do not hesitate to contact me at (304) 261-0254 or at [Rigler@ussilica.com](mailto:Rigler@ussilica.com).

Sincerely,

Andrew Rigler  
EHS Manager

U.S. Silica Company



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WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**DIVISION OF AIR QUALITY**

601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
(304) 926-0475  
[www.dep.wv.gov/daq](http://www.dep.wv.gov/daq)

**APPLICATION FOR NSR PERMIT  
AND  
TITLE V PERMIT REVISION  
(OPTIONAL)**

PLEASE CHECK ALL THAT APPLY TO **NSR (45CSR13)** (IF KNOWN):

- CONSTRUCTION**     **MODIFICATION**     **RELOCATION**  
 **CLASS I ADMINISTRATIVE UPDATE**     **TEMPORARY**  
 **CLASS II ADMINISTRATIVE UPDATE**     **AFTER-THE-FACT**

PLEASE CHECK TYPE OF **45CSR30 (TITLE V)** REVISION (IF ANY):

- ADMINISTRATIVE AMENDMENT**     **MINOR MODIFICATION**  
 **SIGNIFICANT MODIFICATION**

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS **ATTACHMENT S** TO THIS APPLICATION

**FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.**

**Section I. General**

1. Name of applicant (as registered with the WV Secretary of State's Office):  
U.S. Silica Company

2. Federal Employer ID No. (FEIN):  
23-0958670

3. Name of facility (if different from above):

4. The applicant is the:  
 **OWNER**     **OPERATOR**     **BOTH**

5A. Applicant's mailing address:  
2496 Hancock Road  
Berkeley Springs, WV 25411

5B. Facility's present physical address:  
2496 Hancock Road  
Berkeley Springs, WV 25411

6. **West Virginia 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 L.L.C./Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A**.

7. If applicant is a subsidiary corporation, please provide the name of parent corporation:

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

– If **YES**, please explain:    Proposed site is owned by U.S. Silica Company

– If **NO**, you are not eligible for a permit for this source.

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): Limestone crushing and screening plant

9. Type of plant or facility (stationary source) to be <b>constructed, modified, relocated, administratively updated</b> or <b>temporarily permitted</b> (e.g., coal preparation plant, primary crusher, etc.): Limestone crushing and screening plant		10. North American Industry Classification System (NAICS) code for the facility: 212322
11A. DAQ Plant ID No. (for existing facilities only): 065-00001	11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): Title V Permit No. R30-06500001-2014	
<b>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</b>		
12A. <ul style="list-style-type: none"> <li>For <b>Modifications, Administrative Updates</b> or <b>Temporary permits</b> at an existing facility, please provide directions to the <i>present location</i> of the facility from the nearest state road;</li> <li>For <b>Construction</b> or <b>Relocation permits</b>, please provide directions to the <i>proposed new site location</i> from the nearest state road. Include a <b>MAP</b> as <b>Attachment B</b>.</li> </ul> Off Route 522, three miles north of Berkeley Springs, WV.		
12.B. New site address (if applicable): NA	12C. Nearest city or town: Berkeley Springs, WV	12D. County: Morgan County
12.E. UTM Northing (KM): 4393.47	12F. UTM Easting (KM): 739.64	12G. UTM Zone: 17
13. Briefly describe the proposed change(s) at the facility: Renting a portable crusher and portable screener to process sandstone for a trial run for a potential new customer.		
14A. Provide the date of anticipated installation or change: 08/30/2018 <ul style="list-style-type: none"> <li>If this is an <b>After-The-Fact</b> permit application, provide the date upon which the proposed change did happen:</li> </ul>		14B. Date of anticipated Start-Up if a permit is granted: 09/30/2021
14C. Provide a <b>Schedule</b> of the planned <b>Installation of/Change</b> to and <b>Start-Up</b> of each of the units proposed in this permit application as <b>Attachment C</b> (if more than one unit is involved).		
15. Provide maximum projected <b>Operating Schedule</b> of activity/activities outlined in this application: Hours Per Day 24      Days Per Week 7      Weeks Per Year 52		
16. Is demolition or physical renovation at an existing facility involved? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
17. <b>Risk Management Plans.</b> If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see <a href="http://www.epa.gov/ceppo">www.epa.gov/ceppo</a> ), submit your <b>Risk Management Plan (RMP)</b> to U. S. EPA Region III.		
18. <b>Regulatory Discussion.</b> List all Federal and State air pollution control regulations that you believe are applicable to the proposed process ( <i>if known</i> ). A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance ( <i>if known</i> ). Provide this information as <b>Attachment D</b> .		
<b>Section II. Additional attachments and supporting documents.</b>		
19. Include a check payable to WVDEP – Division of Air Quality with the appropriate <b>application fee</b> (per 45CSR22 and 45CSR13).		

20. Include a <b>Table of Contents</b> as the first page of your application package.
21. Provide a <b>Plot Plan</b> , e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as <b>Attachment E</b> (Refer to <b>Plot Plan Guidance</b> ) . – Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).
22. Provide a <b>Detailed Process Flow Diagram(s)</b> showing each proposed or modified emissions unit, emission point and control device as <b>Attachment F</b> .
23. Provide a <b>Process Description</b> as <b>Attachment G</b> . – Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).
<b>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</b>
24. Provide <b>Material Safety Data Sheets (MSDS)</b> for all materials processed, used or produced as <b>Attachment H</b> . – For chemical processes, provide a MSDS for each compound emitted to the air.
25. Fill out the <b>Emission Units Table</b> and provide it as <b>Attachment I</b> .
26. Fill out the <b>Emission Points Data Summary Sheet (Table 1 and Table 2)</b> and provide it as <b>Attachment J</b> .
27. Fill out the <b>Fugitive Emissions Data Summary Sheet</b> and provide it as <b>Attachment K</b> .
28. Check all applicable <b>Emissions Unit Data Sheets</b> listed below: <input type="checkbox"/> Bulk Liquid Transfer Operations <input type="checkbox"/> Haul Road Emissions <input type="checkbox"/> Quarry <input type="checkbox"/> Chemical Processes <input type="checkbox"/> Hot Mix Asphalt Plant <input checked="" type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities <input type="checkbox"/> Concrete Batch Plant <input type="checkbox"/> Incinerator <input type="checkbox"/> Grey Iron and Steel Foundry <input type="checkbox"/> Indirect Heat Exchanger <input type="checkbox"/> Storage Tanks <input type="checkbox"/> General Emission Unit, specify
Fill out and provide the <b>Emissions Unit Data Sheet(s)</b> as <b>Attachment L</b> .
29. Check all applicable <b>Air Pollution Control Device Sheets</b> listed below: <input type="checkbox"/> Absorption Systems <input type="checkbox"/> Baghouse <input type="checkbox"/> Flare <input type="checkbox"/> Adsorption Systems <input type="checkbox"/> Condenser <input type="checkbox"/> Mechanical Collector <input type="checkbox"/> Afterburner <input type="checkbox"/> Electrostatic Precipitator <input type="checkbox"/> Wet Collecting System <input type="checkbox"/> Other Collectors, specify:
Fill out and provide the <b>Air Pollution Control Device Sheet(s)</b> as <b>Attachment M</b> .
30. Provide all <b>Supporting Emissions Calculations</b> as <b>Attachment N</b> , or attach the calculations directly to the forms listed in Items 28 through 31.
31. <b>Monitoring, Recordkeeping, Reporting and Testing Plans.</b> Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as <b>Attachment O</b> . ➤ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.
32. <b>Public Notice.</b> At the time that the application is submitted, place a <b>Class I Legal Advertisement</b> in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and <b>Example Legal Advertisement</b> for details). Please submit the <b>Affidavit of Publication</b> as <b>Attachment P</b> immediately upon receipt.
33. <b>Business Confidentiality Claims.</b> Does this application include confidential information (per 45CSR31)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO ➤ If <b>YES</b> , identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's " <b>Precautionary Notice – Claims of Confidentiality</b> " guidance found in the <b>General Instructions</b> as <b>Attachment Q</b> .

### Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

Authority of Corporation or Other Business Entity

Authority of Partnership

Authority of Governmental Agency

Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R**.

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

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

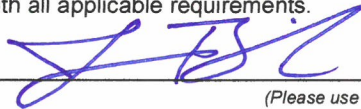
**Certification of Truth, Accuracy, and Completeness**

I, the undersigned  **Responsible Official** /  **Authorized Representative**, hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

**Compliance Certification**

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE



(Please use blue ink)

DATE:

9/10/21

(Please use blue ink)

35B. Printed name of signee: Jason Bish

35C. Title: VP - EHS

35D. E-mail: JBish@ussilica.com

36E. Phone: 314-220-7198

36F. FAX: N/A

36A. Printed name of contact person (if different from above): Andrew Rigler

36B. Title: EHS Manager

36C. E-mail: rigler@ussilica.com

36D. Phone: 304-261-0254

36E. FAX: N/A

**PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Attachment A: Business Certificate               | <input checked="" type="checkbox"/> Attachment K: Fugitive Emissions Data Summary Sheet |
| <input checked="" type="checkbox"/> Attachment B: Map(s)                             | <input checked="" type="checkbox"/> Attachment L: Emissions Unit Data Sheet(s)          |
| <input type="checkbox"/> Attachment C: Installation and Start Up Schedule            | <input type="checkbox"/> Attachment M: Air Pollution Control Device Sheet(s)            |
| <input checked="" type="checkbox"/> Attachment D: Regulatory Discussion              | <input checked="" type="checkbox"/> Attachment N: Supporting Emissions Calculations     |
| <input type="checkbox"/> Attachment E: Plot Plan                                     | <input type="checkbox"/> Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans |
| <input checked="" type="checkbox"/> Attachment F: Detailed Process Flow Diagram(s)   | <input checked="" type="checkbox"/> Attachment P: Public Notice                         |
| <input checked="" type="checkbox"/> Attachment G: Process Description                | <input type="checkbox"/> Attachment Q: Business Confidential Claims                     |
| <input checked="" type="checkbox"/> Attachment H: Material Safety Data Sheets (MSDS) | <input type="checkbox"/> Attachment R: Authority Forms                                  |
| <input checked="" type="checkbox"/> Attachment I: Emission Units Table               | <input type="checkbox"/> Attachment S: Title V Permit Revision Information              |
| <input checked="" type="checkbox"/> Attachment J: Emission Points Data Summary Sheet | <input checked="" type="checkbox"/> Application Fee                                     |

*Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.*

**FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:**

- Forward 1 copy of the application to the Title V Permitting Group and:*
- For Title V Administrative Amendments:*
  - NSR permit writer should notify Title V permit writer of draft permit,*
- For Title V Minor Modifications:*
  - Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,*
  - NSR permit writer should notify Title V permit writer of draft permit.*
- For Title V Significant Modifications processed in parallel with NSR Permit revision:*
  - NSR permit writer should notify a Title V permit writer of draft permit,*
  - Public notice should reference both 45CSR13 and Title V permits,*
  - EPA has 45 day review period of a draft permit.*

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

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

ISSUED TO:  
**U S SILICA COMPANY  
8490 PROGRESS DR 300  
FREDERICK, MD 21701-4996**

BUSINESS REGISTRATION ACCOUNT NUMBER: **1013-3327**

This certificate is issued on: **06/29/2011**

*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.

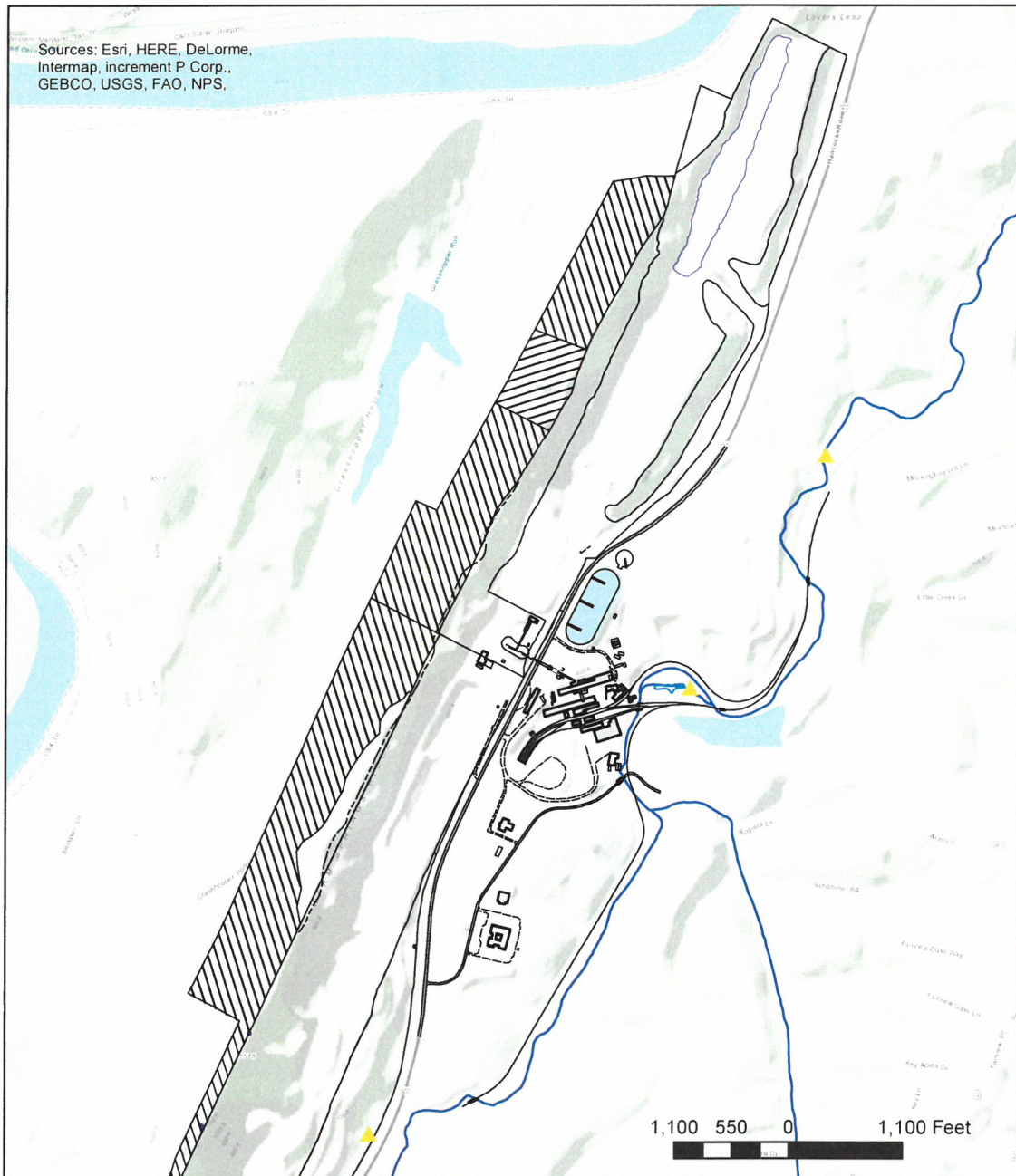
Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

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.



# U.S. Silica Location Map

## Berkeley Springs Plant





### ***Regulatory Discussion***

This section outlines the State and Federal air quality regulations that could be reasonably expected to apply to construct a standalone Limestone Crushing and Screening plant to be included into the air operating permit at the Berkeley Springs Facility. The discussions below provide an applicability determination for each regulation based on activities conducted at the site and the emissions of regulated air pollutants.

#### **WEST VIRGINIA STATE AIR REGULATIONS**

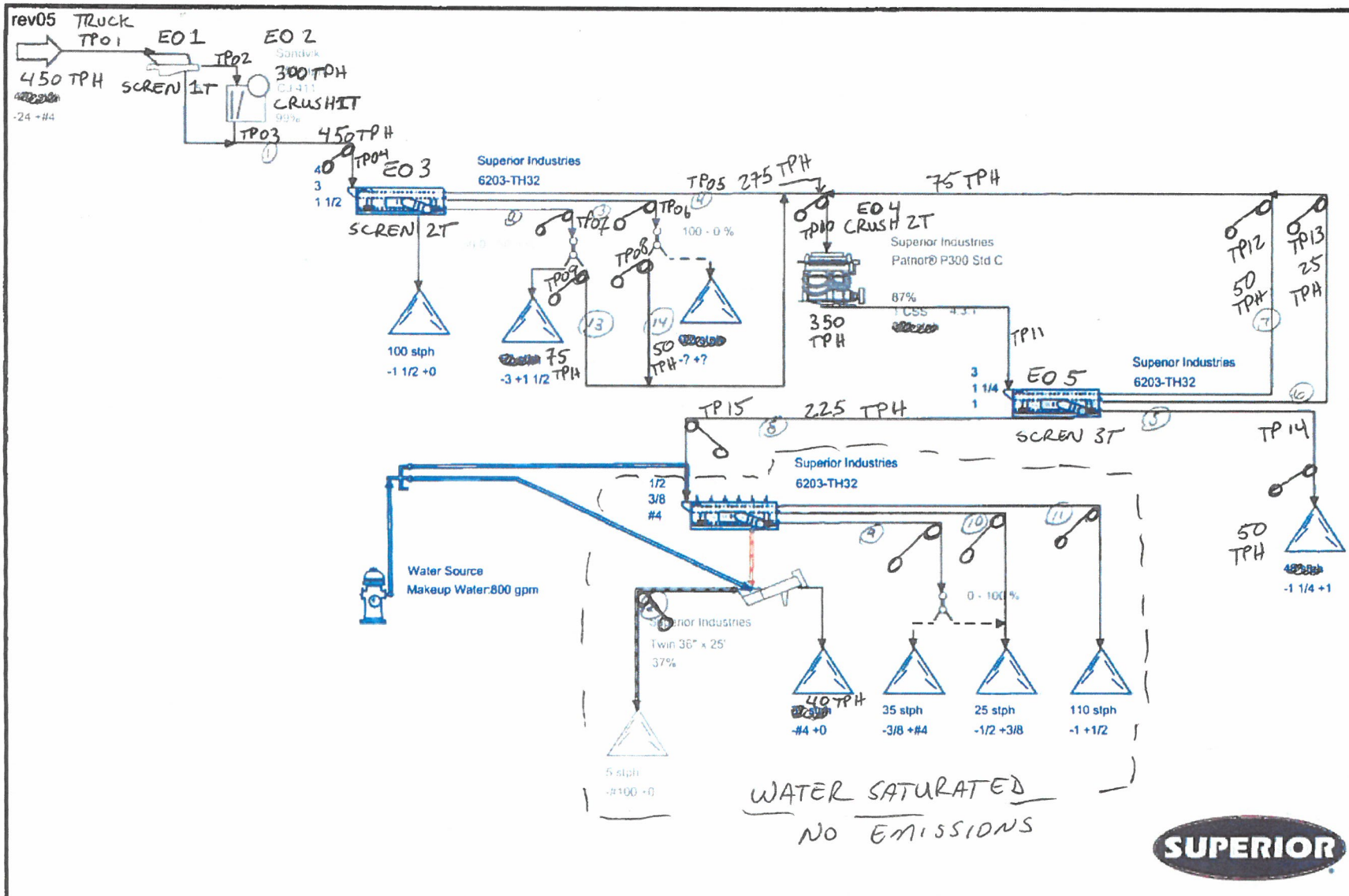
*45 CSR 13- Permits For Construction, Modification, Relocation And Operation Of Stationary Sources Of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission To Commence Construction, And Procedures For Evaluation.*

Due to the proposed changes being experimental, U.S. Silica Company has completed and retained this Temporary Permit Application to demonstrate that the associated increase in the facility Potential to Emit (PTE) will amount to 6.506 TPY of the regulated criteria pollutant Particulate Matter<sub>10</sub> (PM<sub>10</sub>).

#### **FEDERAL REGULATIONS**

*40 CFR 60 Subpart OOO- Standards for performance for Nonmetallic Mineral Processing Plants.*

**40 CFR 60.670.c.2:** Due to the crushing plant operating at a throughput rate of 450 TPH, U.S. Silica will adhere to all applicable monitoring, testing, and reporting regulatory requirements under NSPS standards.



Calculation results may differ due to variations in operating conditions and application of crushing and screening equipment. This information does not constitute an express or implied warranty, but shows results of calculations based on information provided by customers or equipment manufacturers. Use this information for estimating purposes only.  
 All calculations performed by AggFlow. <http://www.AggFlow.com>

Doug Lambert - Superior Industries

210505-1500 6203/36 Twin Wash Plant

Doug Lambert

Plant Stage #1:

Project #: 116572 Revision #: 554776 Date: August/5/2021



***Process Description***

This construction permit application has been completed for U.S. Silica Company and addresses a need for limestone crushing and sizing at the Berkeley Springs Plant. The construction permit application details the use of a limestone crushing and screening plant that will utilize currently stockpiled limestone in the existing quarry at U.S. Silica's Berkeley Springs facility.

The existing stockpiled crushed rock will be transported via front end loader onto the crusher plant at a rate of 450 TPH. The crushing plant with water sprays for control is equipped with a conveying system, screening system, secondary crusher and stockpiling conveyors. Once the material passes through the screens, the oversized material will transfer via conveyor belt to a secondary crusher and back to a screen for sorting into stockpiles of finished product or to a wash plant that will use water to saturate the material for sorting and stockpiling that will be picked by the customer. The undersized material will transfer via conveyor belt to a small pile that will be transported via front-end loader back to the existing stockpile of limestone. A process flow diagram is included as Attachment F.

**Attachment I**  
**Emission Units Table**  
(includes all emission units and air pollution control devices  
that will be part of this permit application review, regardless of permitting status)

Emission Unit ID <sup>1</sup>	Emission Point ID <sup>2</sup>	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type <sup>3</sup> and Date of Change	Control Device <sup>4</sup>
STOCK1T	FP01	Stockpile	2021	40,000 tons	New	FE
CRUSH1T	E02	Primary Crusher	2021	300 TPH	New	FE
CRUSH2T	E04	Secondary Cone Crusher	2021	350 TPH	New	FE
SCREN1T	E01	Scalping Screener	2021	450 TPH	New	FE
SCREN2T	E03	Screener	2021	450 TPH	New	FE
SCREN3T	E05	Screener	2021	350 TPH	New	FE
TRUCK1T	TP01	Front End Loader Feeding Scalping Screen	2021	450 TPH	New	FE
FEEDER1T	TP02	Screen Feeding Crusher	2021	300 TPH	New	FE
CRUSH1T	TP03	Crusher onto Belt Conveyor	2021	300 TPH	New	FE
SCREN1T	TP04	Belt Conveyor Feeding Screener	2021	450 TPH	New	FE
SCRENBC1T	TP05	Conveyor from Screener	2021	275 TPH	New	FE
SCRENBC2T	TP06	Conveyor from Screener	2021	50 TPH	New	FE
SCRENBC3T	TP07	Conveyor from Screener	2021	75 TPH	New	FE
STACKBC1T	TP08	Conveyor belt transfer point	2021	50 TPH	New	FE
STACKBC2T	TP09	Conveyor belt transfer point	2021	75 TPH	New	FE
CRUSH2T	TP010	Conveyor belt Feeding Crusher	2021	350 TPH	New	FE
CRUSHSCR1T	TP011	Crusher Feeding Screener	2021	350 TPH	New	FE
SCRENBC4T	TP012	Conveyor from Screener	2021	50 TPH	New	FE
SCRENBC5T	TP013	Conveyor from Screener	2021	25 TPH	New	FE
SCRENBC6T	TP014	Conveyor from Screener	2021	50 TPH	New	FE
SCRENBC7T	TP015	Conveyor from Screener	2021	225 TPH	New	FE

<sup>1</sup> For Emission Units (or Sources) use the following numbering system: 1S, 2S, 3S,... or other appropriate designation.

<sup>2</sup> For Emission Points use the following numbering system: 1E, 2E, 3E, ... or other appropriate designation.

<sup>3</sup> New, modification, removal

<sup>4</sup> For Control Devices use the following numbering system: 1C, 2C, 3C,... or other appropriate designation.

**Attachment J  
EMISSION POINTS DATA SUMMARY SHEET**

Table 1: Emissions Data															
Emission Point ID No. <i>(Must match Emission Units Table &amp; Plot Plan)</i>	Emission Point Type <sup>1</sup>	Emission Unit Vented Through This Point <i>(Must match Emission Units Table &amp; Plot Plan)</i>		Air Pollution Control Device <i>(Must match Emission Units Table &amp; Plot Plan)</i>		Vent Time for Emission Unit <i>(chemical processes only)</i>		All Regulated Pollutants - Chemical Name/CAS <sup>3</sup>  <i>(Speciate VOCs &amp; HAPS)</i>	Maximum Potential Uncontrolled Emissions <sup>4</sup>		Maximum Potential Controlled Emissions <sup>5</sup>		Emission Form or Phase  <i>(At exit conditions, Solid, Liquid or Gas/Vapor)</i>	Est. Method Used <sup>6</sup>	Emission Concentration <sup>7</sup> <i>(ppmv or mg/m<sup>4</sup>)</i>
		ID No.	Source	ID No.	Device Type	Short Term <sup>2</sup>	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
E01	Scalping Screen				N/A			PM10	0.333	1.459			Solid	EE	
E02	Primary Crusher				N/A			PM10	0.222	0.972			Solid	EE	
E03	Screener				N/A			PM10	0.333	1.459			Solid	EE	
E04	Secondary Crusher				N/A			PM10	0.259	1.134			Solid	EE	
E05	Screener				N/A			PM10	0.259	1.134					
TP01	Front End Loader feeding Scalping Screen				N/A			PM10	0.007	0.032			Solid	EE	

TP02	Scalping Screen Feeding Crusher				N/A			PM10				Solid	EE	
									0.014	0.060				
TP03	Crusher feeding belt conveyer				N/A			PM10				Solid	EE	
									0.014	0.060				
TP04	Belt Conveyer Feeding Screener				N/A			PM10				Solid	EE	
									0.021	0.091				
TP05	Conveyor From Screener				N/A			PM10				Solid	EE	
									0.013	0.055				
TP06	Conveyor From Screener				N/A			PM10				Solid	EE	
									0.002	0.010				
TP07	Conveyor From Screener				N/A			PM10				Solid	EE	
									0.003	0.015				
TP08	Conveyor belt transfer point				N/A			PM10				Solid	EE	
									0.002	0.010				
TP09	Conveyor belt transfer point				N/A			PM10				Solid	EE	
									0.003	0.015				

TP010	Conveyor belt Feeding Crusher				N/A			PM10			Solid	EE	
									0.016	0.071			
TP011	Crusher Feeding Screener				N/A			PM10			Solid	EE	
									0.016	0.071			
TP012	Conveyor belt From Screener				N/A			PM10			Solid	EE	
									0.002	0.010			
TP013	Conveyor belt From Screener				N/A			PM10			Solid	EE	
									0.001	0.005			
TP014	Conveyor belt From Screener				N/A			PM10			Solid	EE	
									0.002	0.010			
TP015	Conveyor belt From Screener				N/A			PM10			Solid	EE	
									0.010	0.045			

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

<sup>1</sup> Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

<sup>2</sup> Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

<sup>3</sup> List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. **LIST** Acids, CO, CS<sub>2</sub>, VOCs, H<sub>2</sub>S, Inorganics, Lead, Organics, O<sub>3</sub>, NO, NO<sub>2</sub>, SO<sub>2</sub>, SO<sub>3</sub>, all applicable Greenhouse Gases (including CO<sub>2</sub> and methane), etc. **DO NOT LIST** H<sub>2</sub>, H<sub>2</sub>O, N<sub>2</sub>, O<sub>2</sub>, and Noble Gases.

<sup>4</sup> Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

<sup>5</sup> Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

<sup>6</sup> Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).



<sup>7</sup> Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m<sup>3</sup>) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO<sub>2</sub>, use units of ppmv (See 45CSR10).

**Attachment J  
EMISSION POINTS DATA SUMMARY SHEET**

Table 2: Release Parameter Data								
Emission Point ID No. <i>(Must match Emission Units Table)</i>	Inner Diameter (ft.)	Exit Gas			Emission Point Elevation (ft)		UTM Coordinates (km)	
		Temp. (°F)	Volumetric Flow <sup>1</sup> (acfm) <i>at operating conditions</i>	Velocity (fps)	Ground Level <i>(Height above mean sea level)</i>	Stack Height <sup>2</sup> <i>(Release height of emissions above ground level)</i>	Northing	Easting
E01	N/A	N/A	N/A	N/A	250	N/A		
E02	N/A	N/A	N/A	N/A	300	N/A		
E03	N/A	N/A	N/A	N/A	200	N/A		
E04	N/A	N/A	N/A	N/A	500	N/A		
TP01	N/A	N/A	N/A	N/A	350	N/A		
TP02	N/A	N/A	N/A	N/A	350	N/A		
TP03	N/A	N/A	N/A	N/A	250	N/A		
TP04	N/A	N/A	N/A	N/A	150	N/A		
TP05	N/A	N/A	N/A	N/A	300	N/A		
TP06	N/A	N/A	N/A	N/A	100	N/A		
TP07	N/A	N/A	N/A	N/A	300	N/A		
TP08	N/A	N/A	N/A	N/A	100	N/A		
TP09	N/A	N/A	N/A	N/A	100	N/A		
TP010	N/A	N/A	N/A	N/A	150	N/A		
TP011	N/A	N/A	N/A	N/A	100	N/A		
TP012	N/A	N/A	N/A	N/A	100	N/A		
TP013	N/A	N/A	N/A	N/A	150	N/A		

TP014	N/A	N/A	N/A	N/A	300	N/A		
TP015	N/A	N/A	N/A	N/A	300	N/A		

<sup>1</sup> Give at operating conditions. Include inerts.

<sup>2</sup> Release height of emissions above ground level.

## Attachment K

### FUGITIVE EMISSIONS DATA SUMMARY SHEET

The FUGITIVE EMISSIONS SUMMARY SHEET provides a summation of fugitive emissions. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. Note that uncaptured process emissions are not typically considered to be fugitive, and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET.

Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions).

APPLICATION FORMS CHECKLIST - FUGITIVE EMISSIONS
1.) Will there be haul road activities? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET.
2.) Will there be Storage Piles? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET.
3.) Will there be Liquid Loading/Unloading Operations? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.
4.) Will there be emissions of air pollutants from Wastewater Treatment Evaporation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
5.) Will there be Equipment Leaks (e.g. leaks from pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, cooling towers, etc.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the LEAK SOURCE DATA SHEET section of the CHEMICAL PROCESSES EMISSIONS UNIT DATA SHEET.
6.) Will there be General Clean-up VOC Operations? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
7.) Will there be any other activities that generate fugitive emissions? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET or the most appropriate form.
If you answered "NO" to all of the items above, it is not necessary to complete the following table, "Fugitive Emissions Summary."

FUGITIVE EMISSIONS SUMMARY	All Regulated Pollutants - Chemical Name/CAS <sup>1</sup>	Maximum Potential Uncontrolled Emissions <sup>2</sup>		Maximum Potential Controlled Emissions <sup>3</sup>		Est. Method Used <sup>4</sup>
		lb/hr	ton/yr	lb/hr	ton/yr	
Haul Road/Road Dust Emissions Paved Haul Roads						
Unpaved Haul Roads						
Storage Pile Emissions	PM10	0.003	0.014	N/A	N/A	EE
Loading/Unloading Operations						
Wastewater Treatment Evaporation & Operations						
Equipment Leaks		Does not apply		Does not apply		
General Clean-up VOC Emissions						
Other						

<sup>1</sup> List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS<sub>2</sub>, VOCs, H<sub>2</sub>S, Inorganics, Lead, Organics, O<sub>3</sub>, NO, NO<sub>2</sub>, SO<sub>2</sub>, SO<sub>3</sub>, all applicable Greenhouse Gases (including CO<sub>2</sub> and methane), etc. DO NOT LIST H<sub>2</sub>, H<sub>2</sub>O, N<sub>2</sub>, O<sub>2</sub>, and Noble Gases.

<sup>2</sup> Give rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

<sup>3</sup> Give rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

<sup>4</sup> Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

Crushing	PM		PM-10		PM-2.5	
	Controlled		Controlled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
CRUSH1T- E02	0.66	2.8908	0.222	0.97236	0	0
CRUSH2T- E04	0.77	3.3726	0.259	1.13442	0	0

Crushing - controlled* (30502002)	PM	PM10	PM2.5
	0.0022	0.00074	0

\* AP-42 Emission Factor for Crushed Stone Processing Operations with control through water sprays

Screening	PM		PM-10		PM-2.5	
	Controlled		Controlled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
SCREN1T- E01	0.99	4.3362	0.333	1.45854	0	0
SCREN2T- E03	0.99	4.3362	0.333	1.45854	0	0
SCREN3T- E05	0.77	3.3726	0.259	1.13442	0	0

Screening - controlled*	PM	PM10	PM2.5
(30502021)	0.0022	0.00074	0

\* AP-42 Emission Factor for Crushed Stone Processing Operations with control through water sprays

Transfer Points Emissions	PM		PM-10		PM-2.5	
	Controlled		Controlled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
TRUCK1T- TP01 (1)	0.007	0.032	0.007	0.032	0.007	0.032
FEEDER1T- TP02 (2)	0.042	0.184	0.014	0.060	0.004	0.017
CRUSH1T- TP03 (2)	0.042	0.184	0.014	0.060	0.004	0.017
SCREN1T- TP04 (2)	0.063	0.276	0.021	0.091	0.006	0.026
SCRENBC1T- TP05 (2)	0.039	0.169	0.013	0.055	0.004	0.016
SCRENBC2T- TP06 (2)	0.007	0.031	0.002	0.010	0.001	0.003
SCRENBC3T- TP07 (2)	0.011	0.046	0.003	0.015	0.001	0.004
STACKBC1T- TP08 (2)	0.007	0.031	0.002	0.010	0.001	0.003
STACKBC2T- TP09 (2)	0.011	0.046	0.003	0.015	0.001	0.004
CRUSH2T- TP10 (2)	0.049	0.215	0.016	0.071	0.005	0.020
CRUSHSCR1T- TP11 (2)	0.049	0.215	0.016	0.071	0.005	0.020
SCRENBC4T- TP12 (2)	0.007	0.031	0.002	0.010	0.001	0.003
SCRENBC5T- TP13 (2)	0.004	0.015	0.001	0.005	0.000	0.001
SCRENBC6T- TP14 (2)	0.007	0.031	0.002	0.010	0.001	0.003
SCRENBC7T- TP15 (2)	0.032	0.138	0.010	0.045	0.003	0.013
Total	0.217	0.951	0.0762	0.334	0.027	0.117

1.

Truck Unloading Fragmented Stone (30502031)			
	PM	PM10	PM2.5
Controlled	0.000016	0.000016	0.000016

LB/TON

2.

Miscellaneous Operations: Convey/Handling (30502006)			
	PM	PM10	PM2.5
Controlled	0.00014	0.000046	0.000013

LB/TON

Wind Erosion Stockpile Emissions	PM				PM-10			
	Uncontrolled		Uncontrolled		Uncontrolled		Uncontrolled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
STOCK1T- FP01	0.007	0.029	0.003	0.014	0.000	0.002		

**Material Storage Pile Wind Erosion Annual Emissions**

Emission Unit ID	Source Description	Size (acres)	Emission Control Method	Control Efficiency	Days in Reporting Period	Emission Factor <sup>a</sup>			Unit	
						PM	PM <sub>10</sub>	PM <sub>2.5</sub>		
STOCK1T		0	0.16	0	0.00	365	0.16	0.08	0.01	lb/day

A. USEPA, 1992 (Fugitive Dust Background and Technical Information Document for Best Available Control Measures, Section 2.3.1.3.3, Wind Emissions from Continuously Active Piles). USEPA, 2006 13.2.5 for k factors:

$$EF \text{ (lb/day/acre)} = k \times 1.7 \times (s/1.5) \times ((365 - p)/235) \times (f/15)^2 \times (1 - \% \text{ Control Efficiency})$$

B. Total PM assumed to be equal to PM < 30 µm

C. Total days of precipitation greater than or equal to 0.01 inch from U.S. EPA, AP-42 Section 13.2.2 - Unpaved Roads (November 2006), Figure 13.2.2-1.

Days of precipitation greater than or equal to 0.01 inch (p)

112

D. Time (%) that unobstructed wind speed exceeds 5.4 m/s at mean pile height from climatological data at Wheeling, WV from 2012-2014.

Time (%) that unobstructed wind speed exceeds 5.4 m/s at mean pile height (f)

10

E. Silt content from U.S. EPA, AP-42 Section 13.2.4 - Aggregate Handling and Storage Piles (November 2006), Table 12.2.4-1

Silt Content (%), (s)

1.2

F. Particle Size multiplier from U.S. EPA, AP-42 Section 13.2.5 - Industrial Wind Erosion (November 2006), Table after Equation 2.

Particle Size multiplier (k)  
 1 (for PM < 30 µm)  
 0.5 (for PM < 10 µm)  
 0.075 (for PM < 2.5 µm)



	PM		PM-10		PM-2.5	
	Controlled LB/HR	TPY	Controlled LB/HR	TPY	Controlled LB/HR	TPY
STOCK1T- FP01	0.007	0.029	0.003	0.014	0.000	0.002
CRUSH1T- E02	0.66	2.8908	0.222	0.97236	0	0
CRUSH2T- E04	0.77	3.3726	0.259	1.13442	0	0
SCREN1T- E01	0.99	4.3362	0.333	1.45854	0	0
SCREN2T- E03	0.99	4.3362	0.333	1.45854	0	0
SCREN3T- E05	0.77	3.3726	0.259	1.13442	0	0
TRUCK1T- TP01 (1)	0.007	0.032	0.007	0.032	0.007	0.032
FEEDER1T- TP02 (2)	0.042	0.184	0.014	0.060	0.004	0.017
CRUSH1T- TP03 (2)	0.042	0.184	0.014	0.060	0.004	0.017
SCREN1T- TP04 (2)	0.063	0.276	0.021	0.091	0.006	0.026
SCRENBC1T- TP05 (2)	0.039	0.169	0.013	0.055	0.004	0.016
SCRENBC2T- TP06 (2)	0.007	0.031	0.002	0.010	0.001	0.003
SCRENBC3T- TP07 (2)	0.011	0.046	0.003	0.015	0.001	0.004
STACKBC1T- TP08 (2)	0.007	0.031	0.002	0.010	0.001	0.003
STACKBC2T- TP09 (2)	0.011	0.046	0.003	0.015	0.001	0.004
CRUSH2T- TP10 (2)	0.049	0.215	0.016	0.071	0.005	0.020
CRUSHSCR1T- TP11 (2)	0.049	0.215	0.016	0.071	0.005	0.020
SCRENBC4T- TP12 (2)	0.007	0.031	0.002	0.010	0.001	0.003
SCRENBC5T- TP13 (2)	0.004	0.015	0.001	0.005	0.000	0.001
SCRENBC6T- TP14 (2)	0.007	0.031	0.002	0.010	0.001	0.003
SCRENBC7T- TP15 (2)	0.032	0.138	0.010	0.045	0.003	0.013
Total	4.404	19.288	1.485	6.506	0.027	0.119

**AIR QUALITY PERMIT NOTICE**  
**Notice of Application**

Notice is given that U.S. Silica Company has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Construction Permit for a Portable Limestone crushing and screening operation located on 2496 Hancock Road near Berkeley Springs in Morgan County, West Virginia. The latitude and longitude coordinates are: 78° 13' 15.0000" Longitude 39° 38' 28.0000" (Coordinated from USGS Topographic Map)

The applicant estimates the increased potential to discharge the following Regulated Air Pollutants will be: PM: 13.048, PM10: 4.403, PM2.5: 0.115.

Startup of operation is planned to begin on or about the 31st day of October 2021. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice. Written comments will also be received via email at [DEPAirQualityPermitting@WV.gov](mailto:DEPAirQualityPermitting@WV.gov).

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 41281, during normal business hours.

Dated this the 7th day of September 2021.

By: U.S. Silica Company  
Jason Bish  
Vice President of EHS  
2496 Hancock Road  
Berkeley Springs, WV 25411  
9-8-1tm



Roberts, Daniel P &lt;daniel.p.roberts@wv.gov&gt;

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**Fwd: US Silica 065-00001 Construction Application**

1 message

---

**McCumbers, Carrie** <carrie.mccumbers@wv.gov>  
To: Daniel P Roberts <daniel.p.roberts@wv.gov>

Mon, Sep 20, 2021 at 1:51 PM

FYI - application attached

----- Forwarded message -----

From: **Mink, Stephanie R** <stephanie.r.mink@wv.gov>

Date: Mon, Sep 20, 2021 at 1:24 PM

Subject: US Silica 065-00001 Construction Application

To: Beverly D McKeone &lt;beverly.d.mckeone@wv.gov&gt;, Nicole D Ernest &lt;nicole.d.ernest@wv.gov&gt;

Cc: Carrie McCumbers &lt;carrie.mccumbers@wv.gov&gt;

Bev/Nicole:

We received the attached application in the mail today along with a check in the sum of \$2,000.00. They submitted an original with three copies; I will leave the packet of hard copies on Nicole's desk. If you don't mind, please cc me when you assign the permit and I will make the appropriate note on the check and deliver it to Accounts Receivable this afternoon.

Carrie:

The company marked that there was a minor modification but did not include an attachment S

Thank you

--

**Stephanie Mink**

Secretary 2

West Virginia Department of Environmental Protection

Division of Air Quality, Title V Permitting

601 57<sup>th</sup> Street SE

Charleston, WV 25304

Phone: 304-926-0499 x41281

**US Silica 065-00001 NSR Construction-Minor Mod application 9-20-21.pdf**  
10905K



Roberts, Daniel P &lt;daniel.p.roberts@wv.gov&gt;

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**Fwd: US Silica 065-00001 Construction Application**

1 message

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**McCumbers, Carrie** <carrie.mccumbers@wv.gov>  
To: Daniel P Roberts <daniel.p.roberts@wv.gov>

Mon, Sep 20, 2021 at 1:50 PM

FYI

----- Forwarded message -----

From: **McKeone, Beverly D** <beverly.d.mckeone@wv.gov>

Date: Mon, Sep 20, 2021 at 1:40 PM

Subject: Re: US Silica 065-00001 Construction Application

To: Mink, Stephanie R &lt;stephanie.r.mink@wv.gov&gt;, Martin, Thornton &lt;thornton.e.martin@wv.gov&gt;

Cc: Nicole D Ernest &lt;nicole.d.ernest@wv.gov&gt;, Carrie McCumbers &lt;carrie.mccumbers@wv.gov&gt;, Bev McKeone &lt;beverly.d.mckeone@wv.gov&gt;

Nicole,

Please assign a new R13# for 065-00001, US Silica to Lee Martin.

I think the application fee of \$2000 is correct and we need the affidavit of publication.

Also the applicant must submit a completed emission point data summary sheet and equipment forms for the crushing and screening operation.

Bev

On Mon, Sep 20, 2021 at 1:24 PM Mink, Stephanie R &lt;stephanie.r.mink@wv.gov&gt; wrote:

Bev/Nicole:

We received the attached application in the mail today along with a check in the sum of \$2,000.00. They submitted an original with three copies; I will leave the packet of hard copies on Nicole's desk. If you don't mind, please cc me when you assign the permit and I will make the appropriate note on the check and deliver it to Accounts Receivable this afternoon.

Carrie:

The company marked that there was a minor modification but did not include an attachment S

Thank you

--

**Stephanie Mink**

Secretary 2

West Virginia Department of Environmental Protection

Division of Air Quality, Title V Permitting

601 57<sup>th</sup> Street SE

Charleston, WV 25304

Phone: 304-926-0499 x41281



Roberts, Daniel P &lt;daniel.p.roberts@wv.gov&gt;

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**Fwd: US Silica 065-00001 Construction Application**

1 message

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**McCumbers, Carrie** <carrie.mccumbers@wv.gov>  
To: Daniel P Roberts <daniel.p.roberts@wv.gov>

Mon, Sep 20, 2021 at 1:50 PM

I just assigned this minor modification to you. They marked this as a minor modification, but did not submit an Attachment S. Will you please contact the company and let them know that we need a completed and signed Attachment S?

Thanks,  
Carrie

----- Forwarded message -----

From: **McCumbers, Carrie** <carrie.mccumbers@wv.gov>  
Date: Mon, Sep 20, 2021 at 1:48 PM  
Subject: Re: US Silica 065-00001 Construction Application  
To: Mink, Stephanie R <stephanie.r.mink@wv.gov>  
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>

Stephanie,

Please assign the minor modification to Dan as R30-06500001-2019 (MM01).

Thanks,  
Carrie

On Mon, Sep 20, 2021 at 1:24 PM Mink, Stephanie R <stephanie.r.mink@wv.gov> wrote:  
Bev/Nicole:

We received the attached application in the mail today along with a check in the sum of \$2,000.00. They submitted an original with three copies; I will leave the packet of hard copies on Nicole's desk. If you don't mind, please cc me when you assign the permit and I will make the appropriate note on the check and deliver it to Accounts Receivable this afternoon.

Carrie:  
The company marked that there was a minor modification but did not include an attachment S

Thank you  
--

**Stephanie Mink**

Secretary 2

West Virginia Department of Environmental Protection

Division of Air Quality, Title V Permitting

601 57<sup>th</sup> Street SE

Charleston, WV 25304

Phone: 304-926-0499 x41281

## Division of Air Quality Permit Application Submittal

Please find attached a permit application for :

**[Company Name; Facility Location]**

- DAQ Facility ID (for existing facilities only):
- Current 45CSR13 and 45CSR30 (Title V) permits associated with this process (for existing facilities only):

• **Type of NSR Application (check all that apply):**

- Construction
- Modification
- Class I Administrative Update
- Class II Administrative Update
- Relocation
- Temporary
- Permit Determination

• **Type of 45CSR30 (TITLE V) Application:**

- Title V Initial
- Title V Renewal
- Administrative Amendment\*\*
- Minor Modification\*\*
- Significant Modification\*\*
- Off Permit Change

**\*\*If the box above is checked, include the Title V revision information as ATTACHMENTS to the combined NSR/Title V application.**

• **Payment Type:**

- Credit Card (Instructions to pay by credit card will be sent in the Application Status email.)
- Check (Make checks payable to: WVDEP – Division of Air Quality)

Mail checks to:  
WVDEP – DAQ – Permitting  
Attn: NSR Permitting Secretary  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304

**Please wait until DAQ emails you the Facility ID Number and Permit Application Number. Please add these identifiers to your check or cover letter with your check.**

• **If the permit writer has any questions, please contact (all that apply):**

**Responsible Official/Authorized Representative**

- Name:
- Email:
- Phone Number:

**Company Contact**

- Name:
- Email:
- Phone Number:

**Consultant**

- Name:
- Email:
- Phone Number:

**TITLE V PERMIT APPLICATION CHECKLIST  
FOR ADMINISTRATIVE COMPLETENESS**

<p>A complete application is demonstrated when all the information required below is properly prepared, completed and attached. The items listed below are required information which must be submitted with a Title V permit application. Any submittal will be considered incomplete if the required information is not included.</p>	
<input checked="" type="checkbox"/>	Application signed by a Responsible Official as defined in 45CSR§30-2.38 (“ <i>Section 6: Certification of Information</i> ” page signed and dated)
<input checked="" type="checkbox"/>	Table of Contents (should be included, but not required for administrative completeness)
<input checked="" type="checkbox"/>	Facility information
<input checked="" type="checkbox"/>	Description of process and products, including NAICS and SIC codes, and including alternative operating scenarios
<input checked="" type="checkbox"/>	Area map showing plant location
<input checked="" type="checkbox"/>	Plot plan showing buildings and process areas
<input checked="" type="checkbox"/>	Process flow diagram(s), showing all emission units, control equipment, emission points, and their relationships
<input checked="" type="checkbox"/>	Identification of all applicable requirements with a description of the compliance status, the methods used for demonstrating compliance, and a Schedule of Compliance Form (ATTACHMENT F) for all requirements for which the source is not in compliance
<input checked="" type="checkbox"/>	Listing of all active permits and consent orders (if applicable)
<input checked="" type="checkbox"/>	Facility-wide emissions summary
<input checked="" type="checkbox"/>	Identification of Insignificant Activities
<input checked="" type="checkbox"/>	ATTACHMENT D - Title V Equipment Table completed for all emission units at the facility except those designated as insignificant activities
<input checked="" type="checkbox"/>	ATTACHMENT E - Emission Unit Form completed for each emission unit listed in the Title V Equipment Table (ATTACHMENT D) and a Schedule of Compliance Form (ATTACHMENT F) for all requirements for which the emission unit is not in compliance
<input checked="" type="checkbox"/>	ATTACHMENT G - Air Pollution Control Device Form completed for each control device listed in the Title V Equipment Table (ATTACHMENT D)
<input checked="" type="checkbox"/>	ATTACHMENT H – Compliance Assurance Monitoring (CAM) Plan Form completed for each control device for which the “Is the device subject to CAM?” question is answered “Yes” on the Air Pollution Control Device Form (ATTACHMENT G)
<input type="checkbox"/>	Confidential Information submitted in accordance with 45CSR31



# Berkeley Springs Plant

## Title V Permit to Operate Renewal Application

Permit Number: R30-06500001-2019

October 16, 2023

### Table of Contents

Introduction

Attachment A - Area Map

Attachment B - Plot Plan

Attachment C - Process Flow Diagrams

Attachment D - Equipment Table

Attachment E - Emission Unit Forms

Attachment F - Schedule Of Compliance Forms

Attachment G - Air Pollution Control Device Forms

Attachment H - Compliance Assurance Monitoring (CAM) Forms



#### **Table 4. Revisions to Attachment G - Air Pollution Control Device Forms**

##### **Introduction**

U.S. Silica submitted a Title V permit renewal application to the West Virginia Department of Environmental Protection (WVDEP) in August 2018 to fulfill the permit requirements for a major air pollution emission source. The WVDEP issued a Permit to Operate pursuant to Title V of the Clean Air Act on **May 7, 2019** (Permit No. R30-06500001-2019). This permit will expire on May 7, 2024. The WVDEP requires renewal applications for Title V permits to be submitted no earlier than 12 months and no later than 6 months before the expiration date. As such, the facility must submit its renewal application before November 7, 2023. The following document provides the information required for the renewal application. For completeness the following information is submitted:

- A signed copy of the application (at least one must contain the original “Certification” page signed and dated in blue ink).
- Table of Contents.
- Description of process and products, including NAICS and SIC codes, and including alternative operating scenarios.
- Area map showing plant location and plot plan showing buildings and process areas.
- Process flow diagram(s), showing all emission units, control equipment, emission points, and the ir relationships.
- Identification of all applicable requirements with a description of the compliance status and the methods used for demonstrating compliance.
- The facility is in compliance with all applicable requirements; as such, a Schedule of Compliance Form (ATTACHMENT F) is not included.
- A listing of all active permits and consent orders is included in the General Application Forms.
- The facility-wide emissions summary is included in the General Application Forms.
- Identification of Insignificant Activities is included in the General Application Forms.
- ATTACHMENT D - Title V Equipment Table completed for all emission units at the facility except those designated as insignificant activities.
- ATTACHMENT E - Emission Unit Form completed for each emission unit listed in the Title V Equipment Table (ATTACHMENT D). Detailed Facility-wide emission calculations are included as supplement to Attachment E.
- ATTACHMENT G - Air Pollution Control Device Form completed for each control device listed in the Title V Equipment Table (ATTACHMENT D).
- ATTACHMENT H – Compliance Assurance Monitoring (CAM) Plan Form completed for each control device for which the “Is the device subject to CAM?” question is answered “Yes” on the Air Pollution Control Device Form (ATTACHMENT G).
- The General Application Forms have been signed by a Responsible Official.
- The facility is not seeking confidential information status for this submittal.



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475

www.dep.wv.gov/daq

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

Form with 10 sections: 1. Name of Applicant (U.S. Silica Company), 2. Facility Name (Berkeley Springs Plant), 3. DAQ Plant ID No. (065-00001), 4. Federal Employer ID No. (FEIN) (23-0958670), 5. Permit Application Type (Renewal), 6. Type of Business Entity (Corporation), 7. Is the Applicant the: (Both), 8. Number of onsite employees (78), 9. Governmental Code (Privately owned and operated; 0), 10. Business Confidentiality Claims (No).

<b>11. Mailing Address</b>		
<b>Street or P.O. Box:</b> P.O. Box 187		
<b>City:</b> Berkeley Springs	<b>State:</b> West Virginia	<b>Zip:</b> 25411
<b>Telephone Number:</b> (304) 258-2500	<b>Fax Number:</b> (304) 258-8293	

<b>12. Facility Location</b>					
<b>Street:</b> Route 522 North		<b>City:</b> Berkeley Springs		<b>County:</b> Morgan	
<b>UTM Easting:</b> 739.55	km	<b>UTM Northing:</b> 4393.48	km	<b>Zone:</b> 17 or <input type="checkbox"/> 18	
<b>Directions:</b> Three miles north of Berkeley Springs off of Route 522.					
<b>Portable Source?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
<b>Is facility located within a nonattainment area?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No				<b>If yes, for what air pollutants?</b>	
<b>Is facility located within 50 miles of another state?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				<b>If yes, name the affected state (s).</b> Maryland Pennsylvania	
<b>Is facility located within 100 km of a Class I Area<sup>1</sup>?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				<b>If yes, name the area(s).</b>	
<b>If no, do emissions impact a Class I Area<sup>1</sup>?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
<small><sup>1</sup> Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.</small>					

<b>13. Contact Information</b>		
<b>Responsible Official:</b> Jason Bish		<b>Title:</b> Vice President of EHS, U.S. Silica Company
<b>Street or P.O. Box:</b> 2496 Hancock Road		
<b>City:</b> Berkeley Springs	<b>State:</b> WV	<b>Zip:</b> 25411
<b>Tele phone Number:</b>	<b>Fax Number:</b> N/A	
<b>E-mail address:</b>		
<b>Environmental Contact:</b> Brad Davis		<b>Title:</b> EHS Manager
<b>Street or P.O. Box:</b> 2496 Hancock Rd		
<b>City:</b> Berkeley Springs	<b>State:</b> WV	<b>Zip:</b> 25411
<b>Tele phone Number:</b> (304) 702-5515	<b>Fax Number:</b> N/A	
<b>E-mail address:</b> DavisBra@ussilica.com		
<b>Application Preparer:</b> S/A		<b>Title:</b> S/A
<b>Company:</b> U.S. Silica Company		
<b>Street or P.O. Box:</b> S/A		
<b>City:</b>	<b>State:</b>	<b>Zip:</b>
<b>Tele phone Number:</b>	<b>Fax Number:</b>	
<b>E-mail address:</b>		

**14. Facility Description**

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Industrial Sand Mining and Processing	Silica Sand Products	212322	1446

**Provide a general description of operations.**

Sandstone is mined and processed into unground, ground and micronized silica sand products. Processes include the following:

- Mining
- Crushing
- Screening
- Drying
- Milling
- Classification
- Limestone System
- Packaging and Bulk Loading

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

**Section 2: Applicable Requirements**

<b>18. Applicable Requirements Summary</b>	
Instructions: Mark all applicable requirements.	
<input checked="" type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input checked="" type="checkbox"/> Minor source NSR (45CSR13)	<input type="checkbox"/> PSD (45CSR14)
<input type="checkbox"/> NESHAP (45CSR15)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input checked="" type="checkbox"/> Section 111 NSPS	<input type="checkbox"/> Section 112(d) MACT standards
<input type="checkbox"/> Section 112(g) Case-by-case MACT	<input type="checkbox"/> 112(r) RMP
<input type="checkbox"/> Section 112(i) Early reduction of HAP	<input type="checkbox"/> Consumer/commercial prod. reqts., section 183(e)
<input type="checkbox"/> Section 129 Standards/Reqs.	<input type="checkbox"/> Stratospheric ozone (Title VI)
<input type="checkbox"/> Tank vessel reqt., section 183(f)	<input type="checkbox"/> Emissions cap 45CSR§30-2.6.1
<input type="checkbox"/> NAAQS, increments or visibility (temp. sources)	<input type="checkbox"/> 45CSR27 State enforceable only rule
<input checked="" type="checkbox"/> 45CSR4 State enforceable only rule	<input type="checkbox"/> Acid Rain (Title IV, 45CSR33)
<input type="checkbox"/> Emissions Trading and Banking (45CSR28)	<input checked="" type="checkbox"/> Compliance Assurance Monitoring (40CFR64)
<input type="checkbox"/> CAIR NO <sub>x</sub> Annual Trading Program (45CSR39)	<input type="checkbox"/> CAIR NO <sub>x</sub> Ozone Season Trading Program (45CSR40)
<input type="checkbox"/> CAIR SO <sub>2</sub> Trading Program (45CSR41)	

<b>19. Non-Applicability Determinations</b>
<b>List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.</b>
<input type="checkbox"/> Permit Shield

**19. Non-Applicability Determinations (Continued) - Attach additional pages as necessary.**

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

Permit Shield

**20. Facility-Wide Applicable Requirements**

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/ or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

R30-06500001-2014 (MM 01 & MM 02) 3.1.1. Open burning. The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1. [45CSR§6-3.1.]

R30-06500001-2014 (MM 01 & MM 02) 3.1.2. Open burning exemptions. The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible. [45CSR§6-3.2.]

R30-06500001-2014 (MM 01 & MM 02) 3.1.3. Asbestos. The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them. [40 C.F.R. §61.145(b) and 45CSR34]

R30-06500001-2014 (MM 01 & MM 02) 3.1.4. Odor. No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public. [45CSR§ 4-3.1 State-Enforceable only.]

R30-06500001-2014 (MM 01 & MM 02) 3.1.5. Standby plan for reducing emissions. When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11. [45CSR§ 11-5.2]

R30-06500001-2014 (MM 01 & MM 02) 3.1.6. Emission inventory. The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality. [W.Va. Code § 22-5-4(a)(14)]

R30-06500001-2014 (MM 01 & MM 02) 3.1.7. Ozone-depleting substances. For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (M VACs) in Subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161. [40 C.F.R. 82, Subpart F]

R30-06500001-2014 (MM 01 & MM 02) 3.1.8. Risk Management Plan. Should this stationary source, as defined in 40 C.F.R. § 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. § 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71. [40 C.F.R. 68]

R30-06500001-2014 (MM 01 & MM 02) 3.1.9. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in 45CSR§7-3.2. [45CSR§7-3.1] [45CSR13, R13-0715, B.3, R13-2595, B.2, R13-1970, B.2, R13-1917, B.1, R13-2015, B.6, R13-2423, B.1, R13-2299, B.1]

R30-06500001-2014 (MM 01 & MM 02) 3.1.10. No person shall cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process(es) that pursuant to 45CSR§7-5.1 is required to have a full enclosure and be equipped with a particulate matter control device. [45CSR§7-3.7] [45CSR13, R13-0715, B.3, R13-2595, B.2, R13-1970, B.2, R13-1917, B.1, R13-2015, B.6, R13-2423, B.1, R13-2299, B.1]

R30-06500001-2014 (MM 01 & MM 02) 3.1.11. No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A found at the end of 45CSR7. [45CSR§7-4.1] [45CSR13, R13-0715, B.3, R13-2595, B.2, R13-1970, B.2, R13-1917, B.1, R13-2015, B.6, R13-2423, B.1, R13-2299, B.1]

R30-06500001-2014 (MM 01 & MM 02) 3.1.12. No person shall circumvent the provisions of this rule by adding additional gas to any exhaust or group of exhausts for the purpose of reducing the stack gas concentration. [45CSR§7-4.3]

R30-06500001-2014 (MM 01 & MM 02) 3.1.13. No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable. [45CSR§7-5.1] [45CSR13, R13-0715, B.3, R13-2595, B.2, R13-1970, B.2, R13-1917, B.1, R13-2015, B.6, R13-2423, B.1, R13-2299, B.1]

R30-06500001-2014 (MM 01 & MM 02) 3.1.14. The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment. [45CSR§ 7-5.2] [45CSR13, R13-0715, B.3, R13-2595, B.2, R13-1970, B.2, R13-1917, B.1, R13-2015, B.6, R13-2423, B.1, R13-2299, B.1]

**For all facility-wide applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/ or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

#### **Monitoring Requirements**

R30-06500001-2014 (MM 01 & MM 02) 3.2.1. Each Process Source Operation (See Note below) with a visible emissions limit contained in this permit shall be observed visually at least each calendar week during periods of normal facility operation for a sufficient time interval to determine if the unit has any visible emissions using 40 C.F.R. 60 Appendix A, Method 22. If visible emissions from any of the Process Source Operation are observed during these weekly observations, or at any other time, that appear to exceed the allowable visible emission requirement for the Process Source Operation, visible emissions evaluations in accordance with 45CSR7A shall be conducted as soon as practicable, but no later than one month from the time of the observation. A visible emissions evaluation in accordance with 45CSR7A shall not be required under condition Section 3.2.1 if the visible emissions condition is corrected in a timely manner; the Process Source Operation is operating at normal operating conditions; and, the cause and corrective measures taken are recorded. [45CSR§ 30-5.1.c.]



R30-06500001-2014 (MM 01 & MM 02) 3.2.2. The permittee shall maintain records indicating the use of any dust suppressants or any other suitable dust control measures applied at the facility. The permittee shall also inspect all fugitive dust control systems monthly to ensure that they are operated and maintained in conformance with their designs. The permittee shall maintain records of all scheduled and non-scheduled maintenance and shall state any maintenance or corrective actions taken as a result of the monthly inspections, the times the fugitive dust control system(s) were inoperable and any corrective actions taken.

Preventive maintenance inspections of potential fugitive dust sources, such as outdoor conveying systems, transfer points, and bulk loadouts will be conducted on a periodic basis by operations personnel. This is in addition to the monthly inspections required above.

Parking lots, roadways, other vehicle travel areas, and storage piles will be regularly observed by trained personnel to determine the need for fugitive dust control. A water truck must be available for control of dust on roadways and parking lots on an as needed basis. The water truck will be included in the facility's preventive maintenance program. Dates of water truck usage will be provided on the Pre-Shift Inspection Reports maintained by the Quarry office.

U.S. Silica shall keep all maintenance and preventive maintenance records via a mainframe computer system. [45CSR§30-5.1.c.]

Note : Process Source operations include the following : Primary Crushing Plant, Secondary Crushing Plant, Wet Processing Plant, Screening and unground sand Processing, Milling, 10/15/30/40 Micron Classification, 5 Micron Classification, Wet Float Plant & Storage Structures.

R30-06500001-2014 (MM 01 & MM 02) 3.2.3. (Note: The following section numbers match those of 40 C.F.R. §64.7)

(b) *Proper maintenance.* At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(c) *Continued operation.* Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(d) *Response to excursions or exceedances.* (1) Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(2) Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(e) *Documentation of need for improved monitoring.* After approval of monitoring under this part, if the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while

providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the permitting authority and, if necessary, submit a proposed modification to the part 70 or 71 permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.  
[40CFR§64.7; 45CSR§30-5.1.c.]

Note: This requirement is applicable to sections 4, 5 & 6 of this permit.

R30-06500001-2014 (MM 01 & MM 02) 3.2.4. (Note: The following section numbers match those of 40 C.F.R. §64.8)

§ 64.8 Quality improvement plan (QIP) requirements.

- (a) Based on the results of a determination made under § 64.7(d)(2), the Administrator or the permitting authority may require the owner or operator to develop and implement a QIP. Consistent with § 64.6(c)(3), the part 70 or 71 permit may specify an appropriate threshold, such as an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a reporting period, for requiring the implementation of a QIP. The threshold may be set at a higher or lower percent or may rely on other criteria for purposes of indicating whether a pollutant-specific emissions unit is being maintained and operated in a manner consistent with good air pollution control practices.
- (b) Elements of a QIP:
  - (1) The owner or operator shall maintain a written QIP, if required, and have it available for inspection.
  - (2) The plan initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:
    - (i) Improved preventive maintenance practices.
    - (ii) Process operation changes.
    - (iii) Appropriate improvements to control methods.
    - (iv) Other steps appropriate to correct control performance.
    - (v) More frequent or improved monitoring (only in conjunction with one or more steps under paragraphs (b)(2)(i) through (iv) of this section).
- (c) If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the permitting authority if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.
- (d) Following implementation of a QIP, upon any subsequent determination pursuant to § 64.7(d)(2) the Administrator or the permitting authority may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have:
  - (1) Failed to address the cause of the control device performance problems; or
  - (2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (e) Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

[40CFR§64.8; 45CSR§30-5.1.c.]

Note: This requirement is applicable to sections 4, 5 & 6 of this permit.

## Testing Requirements

R30-06500001-2014 (MM 01 & MM 02) 3.3.1. Stack testing. As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language.
2. The result of the test for each permit or rule condition.
3. A statement of compliance or non-compliance with each permit or rule condition.  
[WV Code § 22-5-4(a)(14-15) and 45CSR13]

R30-06500001-2014 (MM 01 & MM 02) 3.3.2. Except as provided in the terms and conditions of specific emission units, the permittee shall conduct stack tests upon request by Director, establish parameter indicator ranges, and furnish the Secretary a written report of the results of such testing and established indicator ranges. The permittee shall use Method 5 or an alternative method approved by the Secretary for such testing. For wet scrubber control devices, parameter indicator ranges shall be established for the water pressure to the control equipment and the pressure loss of the inlet airflow to the scrubber. The permittee shall establish parameter indicator ranges and operate within these ranges to provide a reasonable assurance that the emission unit is in compliance with opacity and particulate loading limits. The permittee shall take immediate corrective action when a parameter falls outside the indicator range established for that parameter and shall record the cause and corrective measures taken. The permittee shall also record the following parameters during such testing:

- a. Opacity readings on the exhaust stack following the procedures of 45CSR7A;
- b. Amount of material processed;
- c. Water pressure to the control equipment; and
- d. Pressure loss of the inlet airflow to the scrubber. The pressure drop will be measured between the inlet airflow to the scrubber and outlet airflow of the scrubber, which is atmospheric loss through the venturi constriction of the

control equipment.

These records shall be maintained on site and in accordance with 3.4.2.

[45CSR§30-5.1.c.]

R30-06500001-2014 (MM 01 & MM 02) 3.3.3. At such reasonable times as the Director may designate, the operator of any manufacturing process source operation may be required to conduct or have conducted stack tests to determine the particulate matter loading in exhaust gases. Such tests shall be conducted in such manner as the Director may specify and be filed on forms and in a manner acceptable to the Director. The Director, or his duly authorized representative, may at his option witness or conduct such stack tests. Should the Director exercise his option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices.

[45CSR§7-8.1]

R30-06500001-2014 (MM 01 & MM 02) 3.3.4. The Director, or his duly authorized representative, may conduct such other tests as he or she may deem necessary to evaluate air pollution emissions. [45CSR§7-8.2]

### **Recordkeeping Requirements**

R30-06500001-2014 (MM 01 & MM 02) 3.4.1. Monitoring information. The permittee shall keep records of monitoring information that include the following:

- a. The date, place as defined in this permit and time of sampling or measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of the analyses; and
- f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A.]

[45CSR13, R13-2145, 4.4.1.] (SCREN 7-9, 14-15; BE01; BE02; LS01; CF #36; CF #6)

R30-06500001-2014 (MM 01 & MM 02) 3.4.2. Retention of records. The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.

[45CSR§30-5.1.c.2.B.][45CSR13, R13-0715, A.11; R13-2595, B.9]

R30-06500001-2014 (MM 01 & MM 02) 3.4.3. Odors. For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.

[45CSR§30-5.1.c. State-Enforceable only.]

R30-06500001-2014 (MM 01 & MM 02) 3.4.4. A record of each visible emissions observation shall be maintained, including any data required by 40 C.F.R. 60 Appendix A, Method 22 or 45CSR7A, whichever is appropriate. The record shall include, at a minimum, the date, time, name of the emission unit, the applicable visible emissions requirement, the results of the observation, and the name of the observer. Records shall be maintained on site for a period of no less than five (5) years stating any maintenance or corrective actions taken as a result of the weekly inspections, and the times the fugitive dust control system(s) are inoperable and any corrective actions taken.

[45CSR§30-5.1.c.]

## Reporting Requirements

R30-06500001-2014 (MM 01 & MM 02) 3.5.1. Responsible official. Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

[45CSR§§30-4.4. and 5.1.c.3.D.]

R30-06500001-2014 (MM 01 & MM 02) 3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.

[45CSR§30-5.1.c.3.E.]

R30-06500001-2014 (MM 01 & MM 02) 3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5. and 3.5.6. below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:

Director  
WVDEP  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

US EPA:

Associate Director  
Office of Air Enforcement and  
Compliance Assistance (3AP20)  
U. S. Environmental Protection Agency  
Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

R30-06500001-2014 (MM 01 & MM 02) 3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

DAQ: DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

R30-06500001-2014 (MM 01 & MM 02) 3.5.7. Emergencies. For reporting emergency situations, refer to Section 2.17 of this permit.

R30-06500001-2014 (MM 01 & MM 02) 3.5.8. Deviations.

a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

4. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.

5. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.

6. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.

7. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.

[45CSR§30-5.1.c.3.B.]

R30-06500001-2014 (MM 01 & MM 02) 3.5.9. New applicable requirements. If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

[45CSR§30-4.3.h.1.B.]

Permit Shield

Are you in compliance with all facility-wide applicable requirements?  Yes  No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.



**Section 3: Facility-Wide Emissions**

<b>23. Facility-Wide Emissions Summary [Tons per Year]</b>	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	13.75
Nitrogen Oxides (NO <sub>x</sub> )	96.35
Lead (Pb)	0.21
Particulate Matter (PM <sub>2.5</sub> ) <sup>1</sup>	114.30
Particulate Matter (PM <sub>10</sub> ) <sup>1</sup>	239.20
Total Particulate Matter (TSP)	534.96
Sulfur Dioxide (SO <sub>2</sub> )	267.00
Volatile Organic Compounds (VOC)	1.29
Hazardous Air Pollutants <sup>2</sup>	Potential Emissions
Total HAP	2.323
Regulated Pollutants other than Criteria and HAP	Potential Emissions
Carbon Dioxide (CO <sub>2</sub> )	61,682.95
Methane (CH <sub>4</sub> )	2.54
Nitrous Oxide (N <sub>2</sub> O)	0.51

<sup>1</sup>PM<sub>2.5</sub> and PM<sub>10</sub> are components of TSP.

<sup>2</sup>For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.



**Section 4: Insignificant Activities**

<b>24. Insignificant Activities (Check all that apply)</b>	
<input checked="" type="checkbox"/>	1. Air compressors and pneumatically operated equipment, including hand tools.
<input type="checkbox"/>	2. Air contaminant detectors or recorders, combustion controllers or shutoffs.
<input checked="" type="checkbox"/>	3. Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
<input checked="" type="checkbox"/>	4. Bathroom/toilet vent emissions.
<input checked="" type="checkbox"/>	5. Batteries and battery charging stations, except at battery manufacturing plants.
<input checked="" type="checkbox"/>	6. Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
<input type="checkbox"/>	7. Blacksmith forges.
<input type="checkbox"/>	8. Boiler water treatment operations, not including cooling towers.
<input checked="" type="checkbox"/>	9. Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
<input type="checkbox"/>	10. CO <sub>2</sub> lasers, used only on metals and other materials which do not emit HAP in the process.
<input checked="" type="checkbox"/>	11. Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
<input type="checkbox"/>	12. Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
<input checked="" type="checkbox"/>	13. Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
<input type="checkbox"/>	14. Demineralized water tanks and demineralizer vents.
<input checked="" type="checkbox"/>	15. Drop hammers or hydraulic presses for forging or metalworking.
<input checked="" type="checkbox"/>	16. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
<input type="checkbox"/>	17. Emergency (backup) electrical generators at residential locations.
<input checked="" type="checkbox"/>	18. Emergency road flares.
<input checked="" type="checkbox"/>	19. Emission units which do not have any applicable requirements, and which emit criteria pollutants (CO, NO <sub>x</sub> , SO <sub>2</sub> , VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:  <u>All organic liquid tanks listed in Attachment D</u>
<input type="checkbox"/>	20. Emission units which do not have any applicable requirements, and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27. Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:  _____
<input type="checkbox"/>	21. Environmental chambers not using hazardous air pollutant (HAP) gases.
<input checked="" type="checkbox"/>	22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
<input type="checkbox"/>	23. Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
<input checked="" type="checkbox"/>	24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
<input type="checkbox"/>	25. Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
<input checked="" type="checkbox"/>	26. Fire suppression systems.
<input type="checkbox"/>	27. Firefighting equipment and the equipment used to train firefighters.

<b>24. Insignificant Activities (Check all that apply)</b>	
<input type="checkbox"/>	28. Flares used solely to indicate danger to the public.
<input checked="" type="checkbox"/>	29. Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
<input type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input checked="" type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input type="checkbox"/>	32. Humidity chambers.
<input type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input checked="" type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input checked="" type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input type="checkbox"/>	37. Laundry activities, except for dry-cleaning and steam boilers.
<input type="checkbox"/>	38. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
<input type="checkbox"/>	39. Oxygen scavenging (de-aeration) of water.
<input type="checkbox"/>	40. Ozone generators.
<input checked="" type="checkbox"/>	41. Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
<input checked="" type="checkbox"/>	42. Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
<input type="checkbox"/>	43. Process water filtration systems and demineralizers.
<input checked="" type="checkbox"/>	44. Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
<input checked="" type="checkbox"/>	45. Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
<input checked="" type="checkbox"/>	46. Routing calibration and maintenance of laboratory equipment or other analytical instruments.
<input type="checkbox"/>	47. Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
<input type="checkbox"/>	48. Shock chambers.
<input type="checkbox"/>	49. Solar simulators.
<input checked="" type="checkbox"/>	50. Space heaters operating by direct heat transfer.
<input checked="" type="checkbox"/>	51. Steam cleaning operations.
<input type="checkbox"/>	52. Steam leaks.
<input type="checkbox"/>	53. Steam sterilizers.
<input type="checkbox"/>	54. Steam vents and safety relief valves.
<input checked="" type="checkbox"/>	55. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
<input checked="" type="checkbox"/>	56. Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
<input type="checkbox"/>	57. Such other sources or activities as the Director may determine.
<input type="checkbox"/>	58. Tobacco smoking rooms and areas.
<input type="checkbox"/>	59. Vents from continuous emissions monitors and other analyzers.

*Section 5: Emission Units, Control Devices, and Emission Points*

<b>25. Equipment Table</b>
Fill out the <b>Title V Equipment Table</b> and provide it as <b>ATTACHMENT D</b> .
<b>26. Emission Units</b>
For each emission unit listed in the <b>Title V Equipment Table</b> , fill out and provide an <b>Emission Unit Form</b> as <b>ATTACHMENT E</b> .
For each emission unit not in compliance with an applicable requirement, fill out a <b>Schedule of Compliance Form</b> as <b>ATTACHMENT F</b> .
<b>27. Control Devices</b>
For each control device listed in the <b>Title V Equipment Table</b> , fill out and provide an <b>Air Pollution Control Device Form</b> as <b>ATTACHMENT G</b> .
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the <b>Compliance Assurance Monitoring (CAM) Form(s)</b> for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as <b>ATTACHMENT H</b> .

**28. Certification of Truth, Accuracy and Completeness and Certification of Compliance**

*Note: This Certification must be signed by a responsible official. The original, signed in blue ink, must be submitted with the application. Applications without an original signed certification will be considered as incomplete.*

**a. Certification of Truth, Accuracy and Completeness**

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

**b. Compliance Certification**

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

**Responsible official (type or print)**

Name: Jason Bish

Title: Vice President of EHS

**Responsible official's signature:**

Signature: 

Signature Date: 10/23/23

(Must be signed and dated in blue ink)

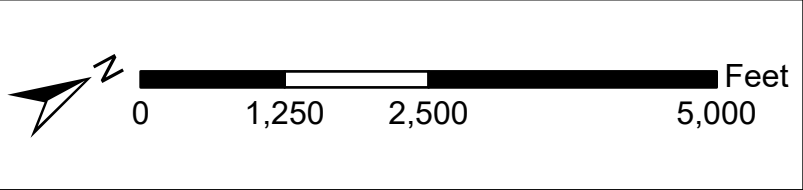
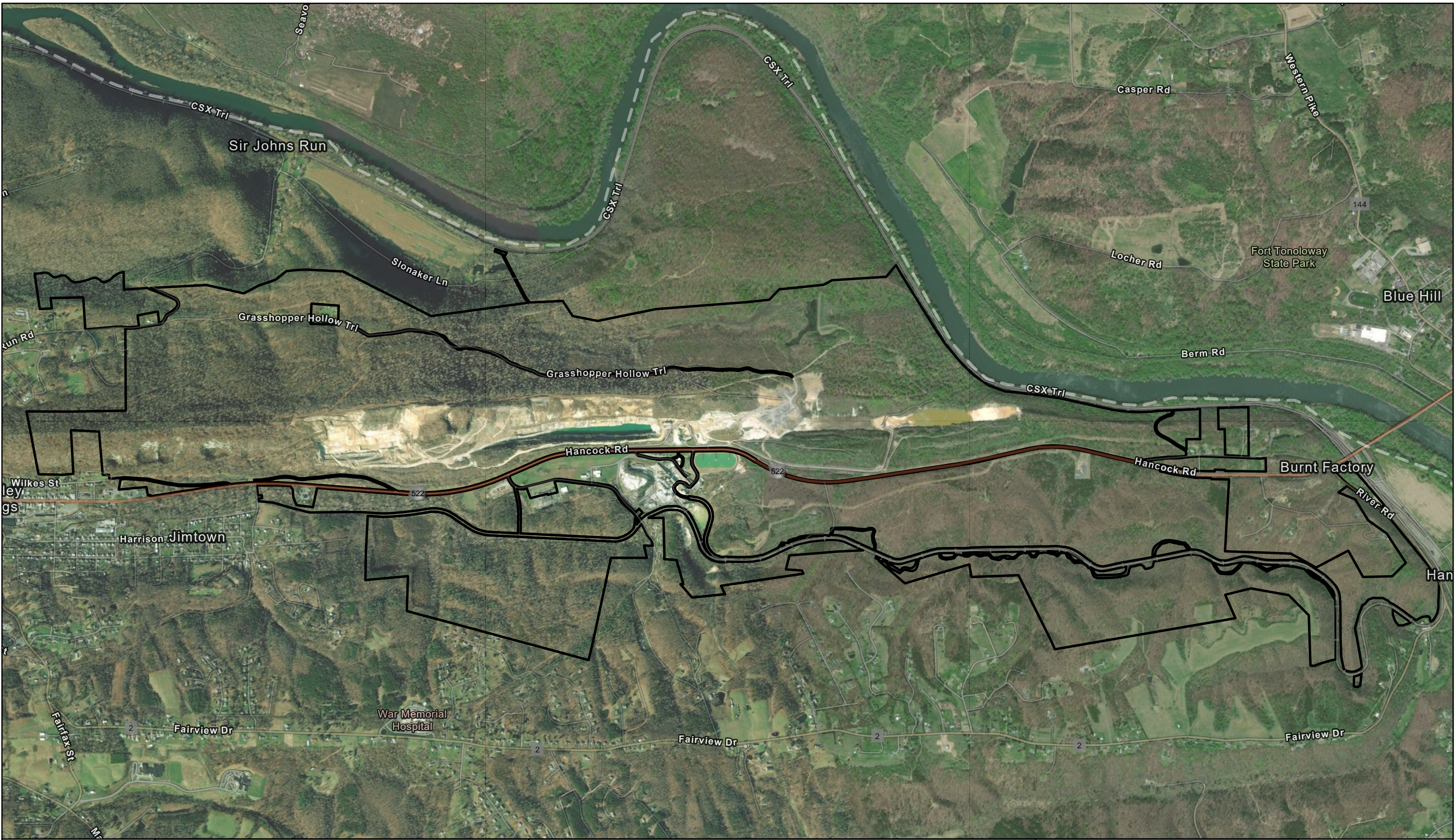
**Note: Please check all applicable attachments included with this permit application:**

<input checked="" type="checkbox"/>	ATTACHMENT A: Area Map
<input checked="" type="checkbox"/>	ATTACHMENT B: Plot Plan(s)
<input checked="" type="checkbox"/>	ATTACHMENT C: Process Flow Diagram(s)
<input checked="" type="checkbox"/>	ATTACHMENT D: Equipment Table
<input checked="" type="checkbox"/>	ATTACHMENT E: Emission Unit Form(s)
<input checked="" type="checkbox"/>	ATTACHMENT F: Schedule of Compliance Form(s) (Not Applicable Based on Compliance Status)
<input checked="" type="checkbox"/>	ATTACHMENT G: Air Pollution Control Device Form(s)
<input checked="" type="checkbox"/>	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s) (Included but No Changes to Prior Version)

**All of the required forms and additional information can be found and downloaded from, the DEP website at [www.dep.wv.gov/dag](http://www.dep.wv.gov/dag), requested by phone (304) 926-0475, and/or obtained through the map**

Attachment A

Area Map



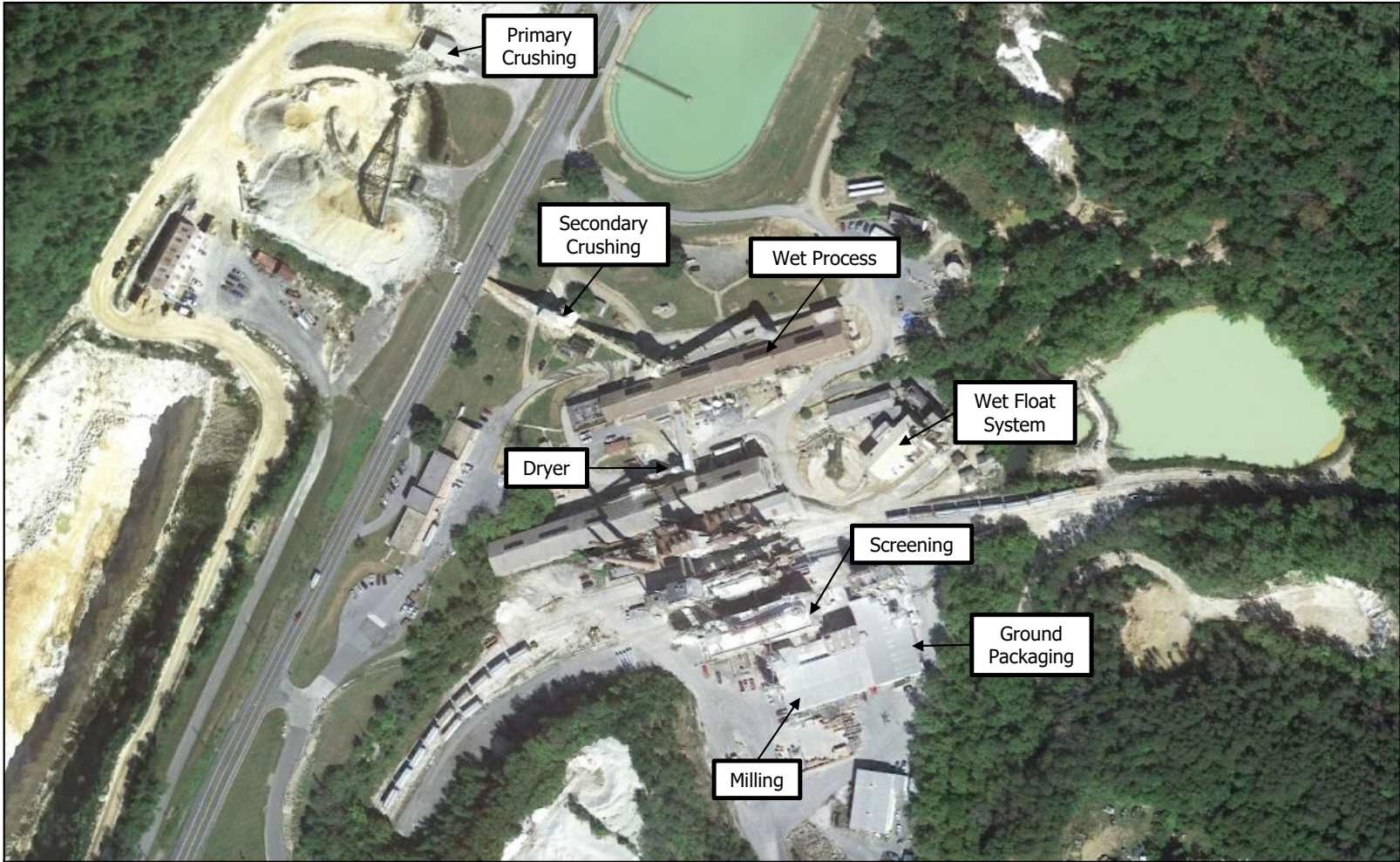
# Berkeley Facility Site Map

Property Outline

Created By: T. A. Lindblad
Date: 10052023
File Location: \\BerkeleyWestVirginia\Outline

Attachment B

Plot Plan



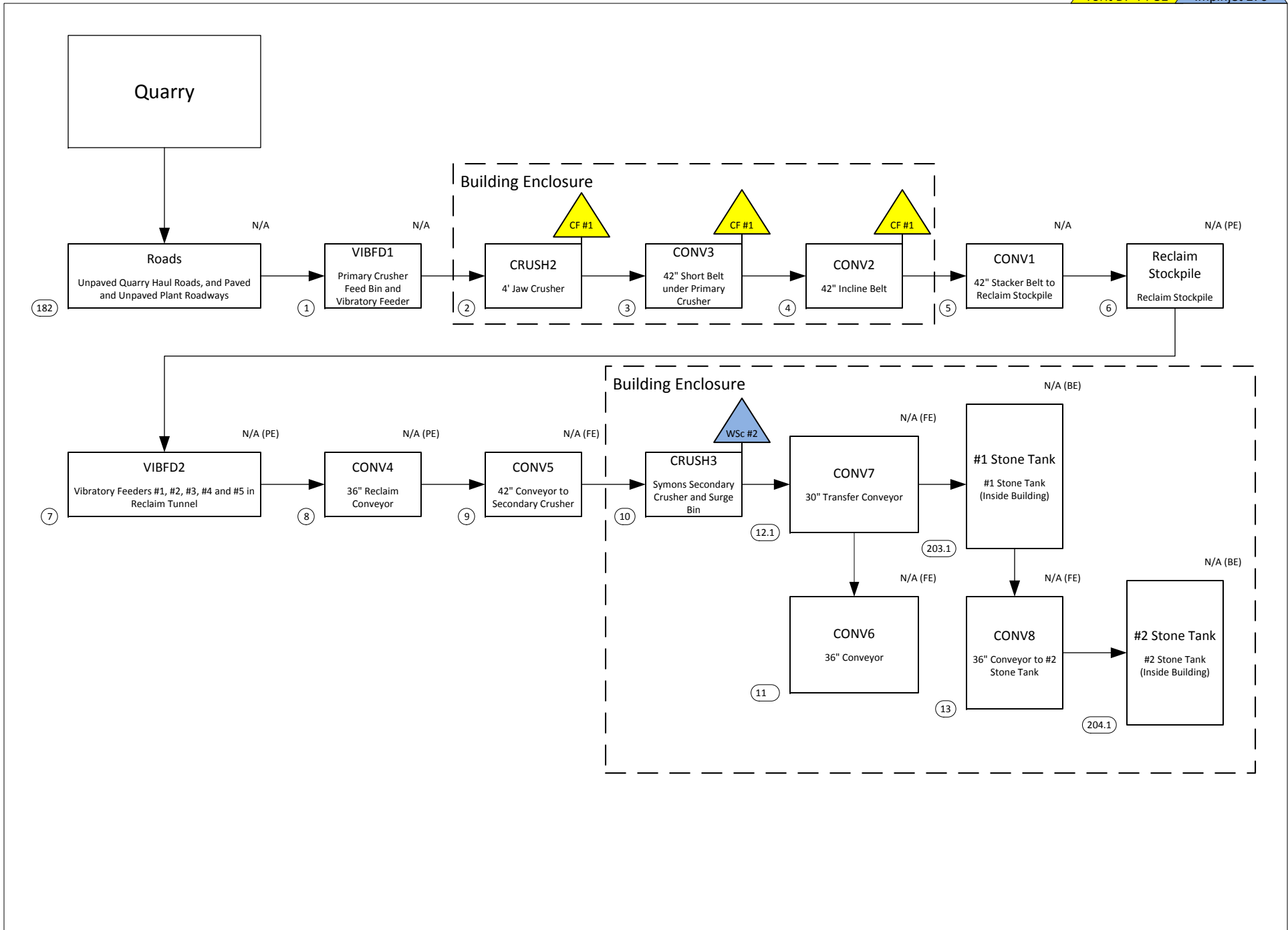
 Environmental Department		<b>Berkeley Facility Plot Plan</b>	
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Attachment C

Process Flow Diagram

Figure 1. Primary and Secondary Crushing



**Figure 2. Wet Processing Plant ( Rod Mill Building )**

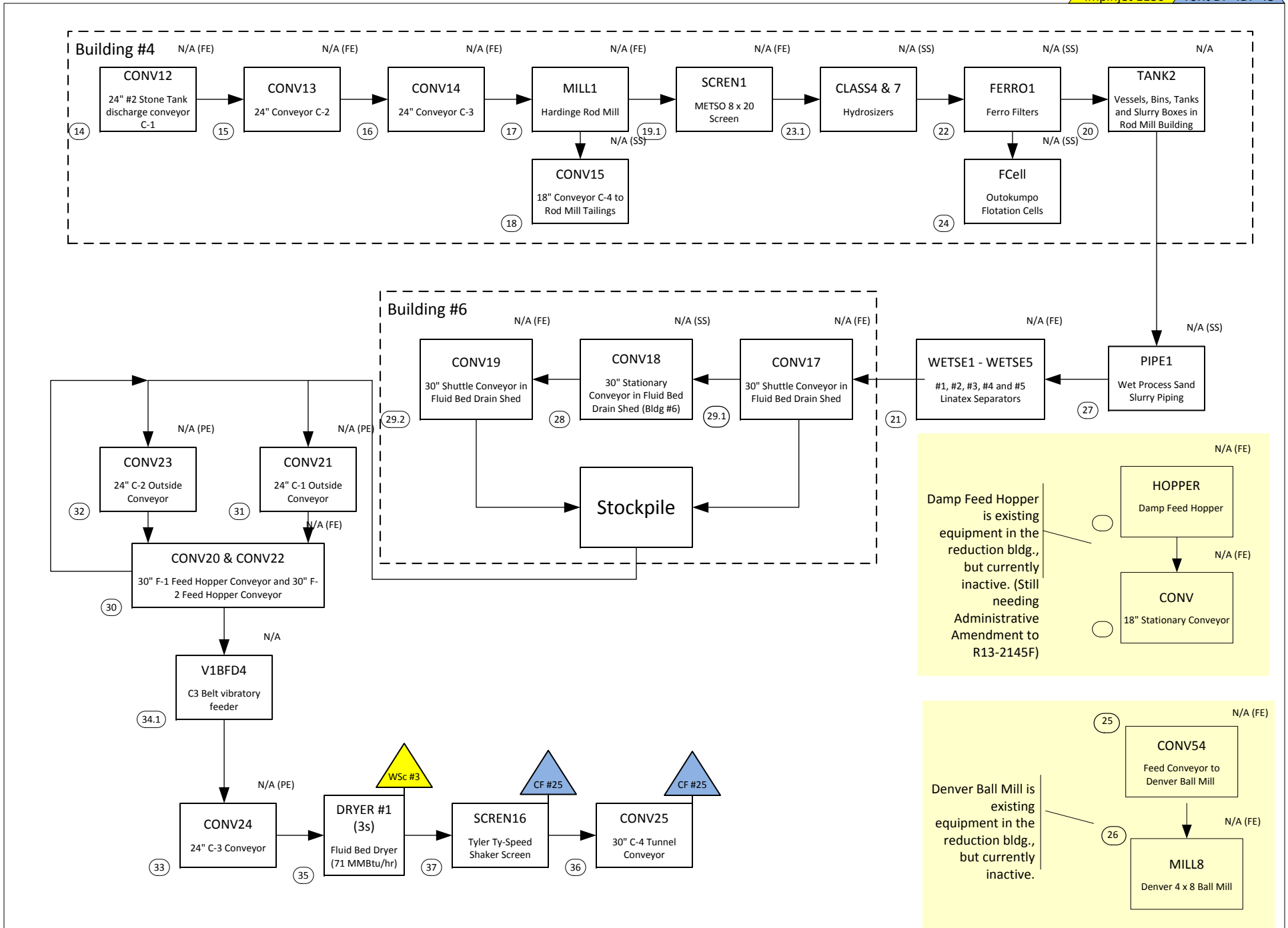
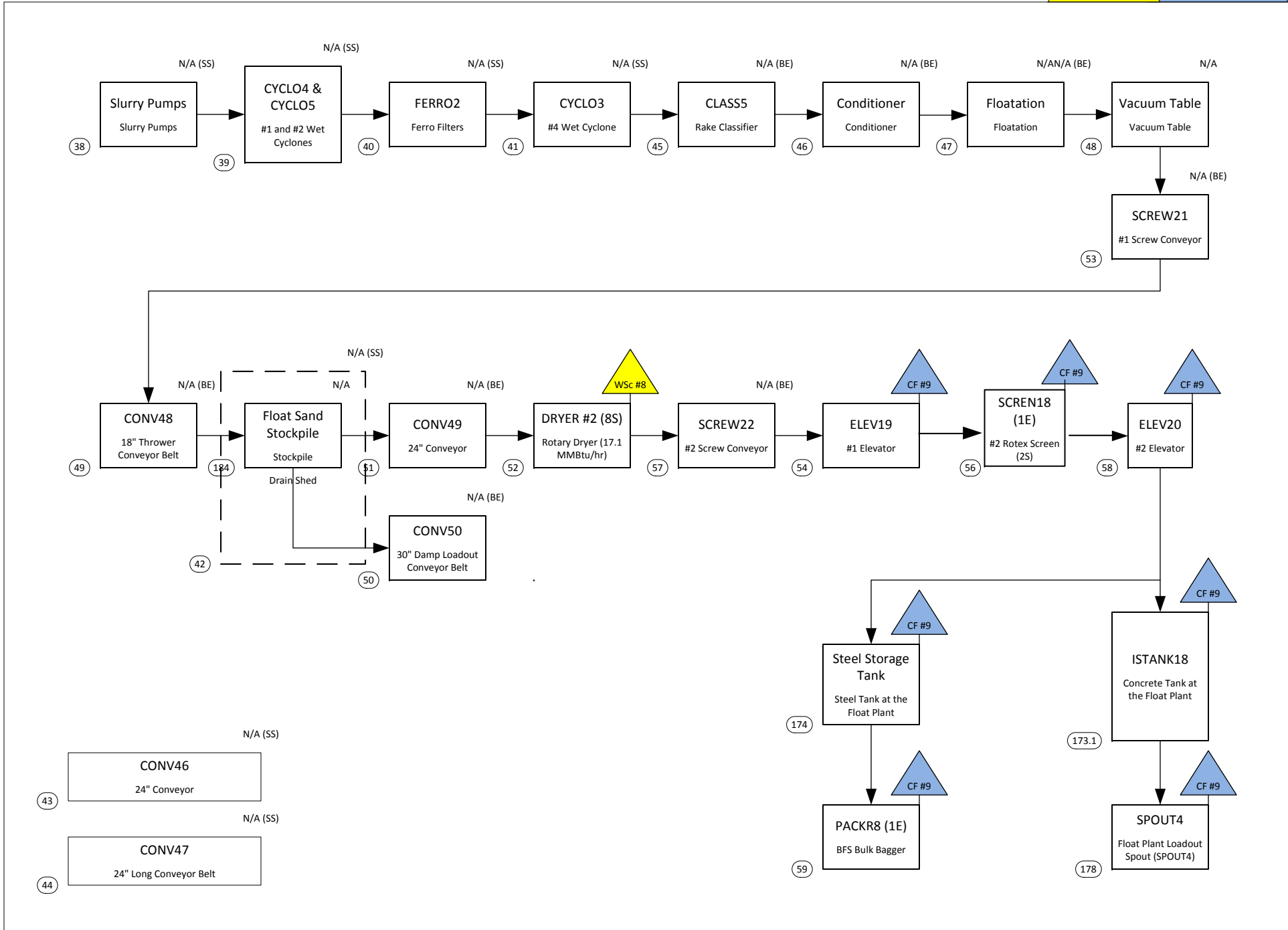


Figure 3. Wet Float System (Currently Inactive)



**Figure 4. Screening and Uground Sand Processing (6-4-13)**

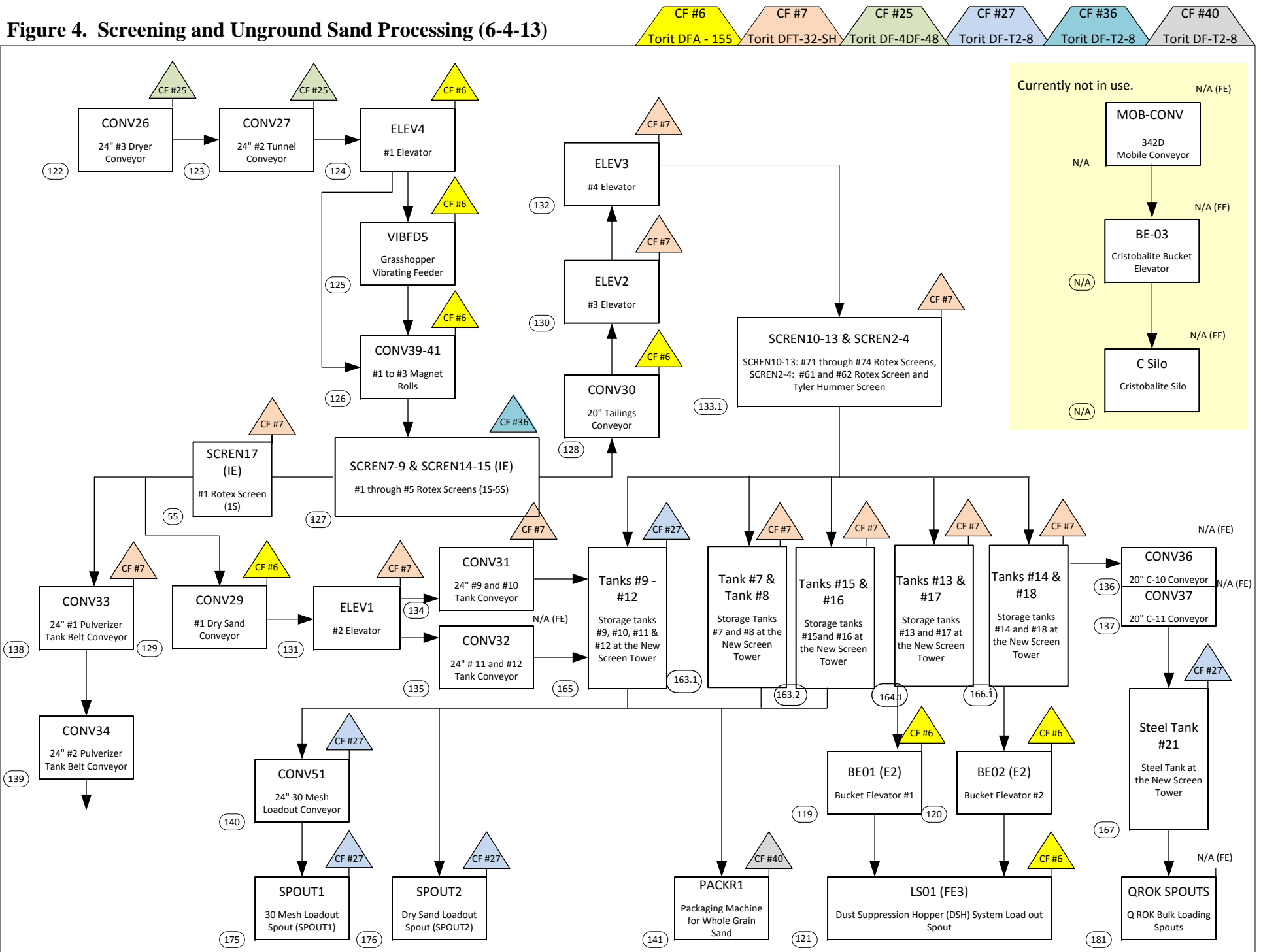


Figure 5. Milling - #1 through #4 Pebble Mills

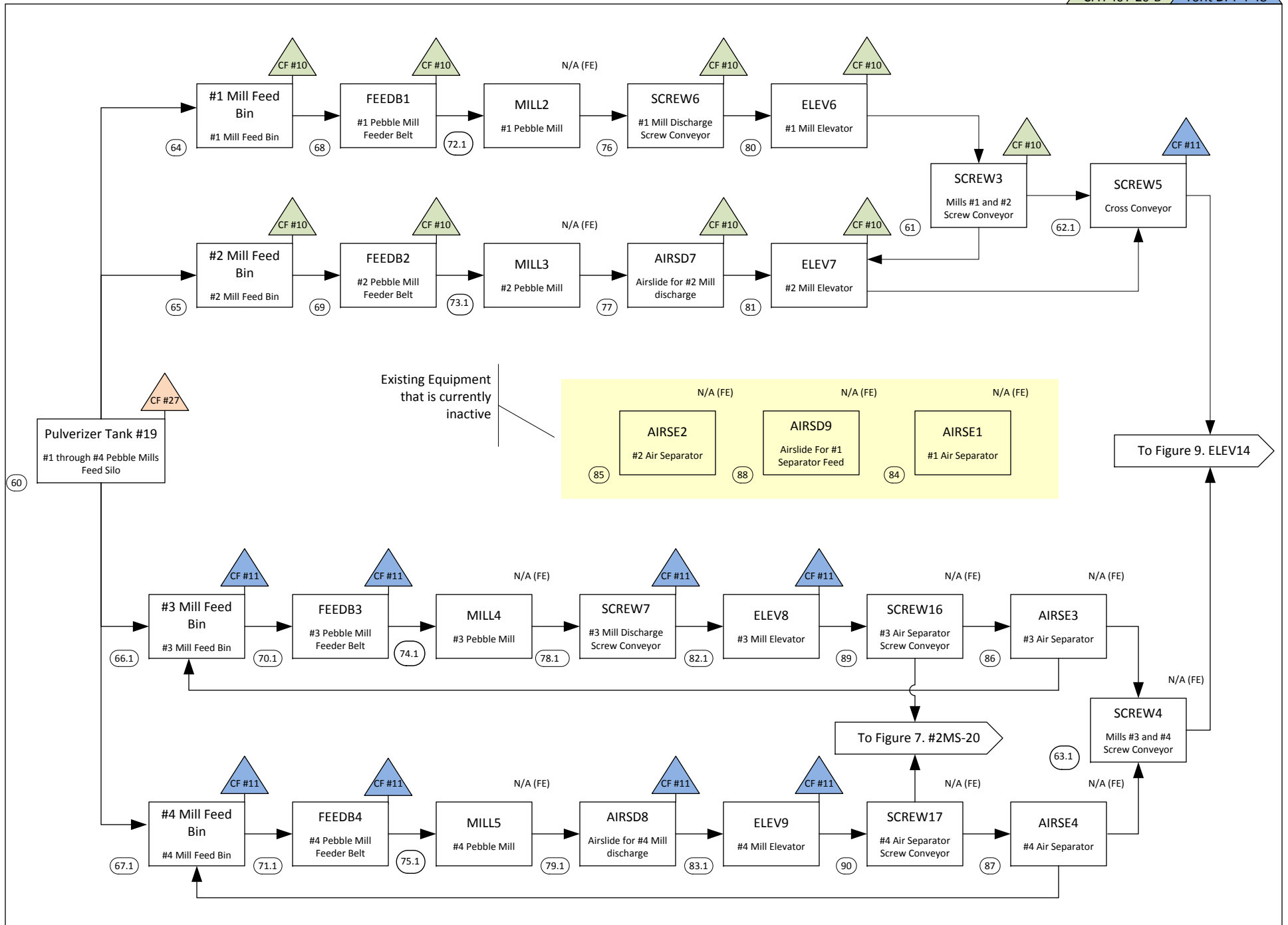
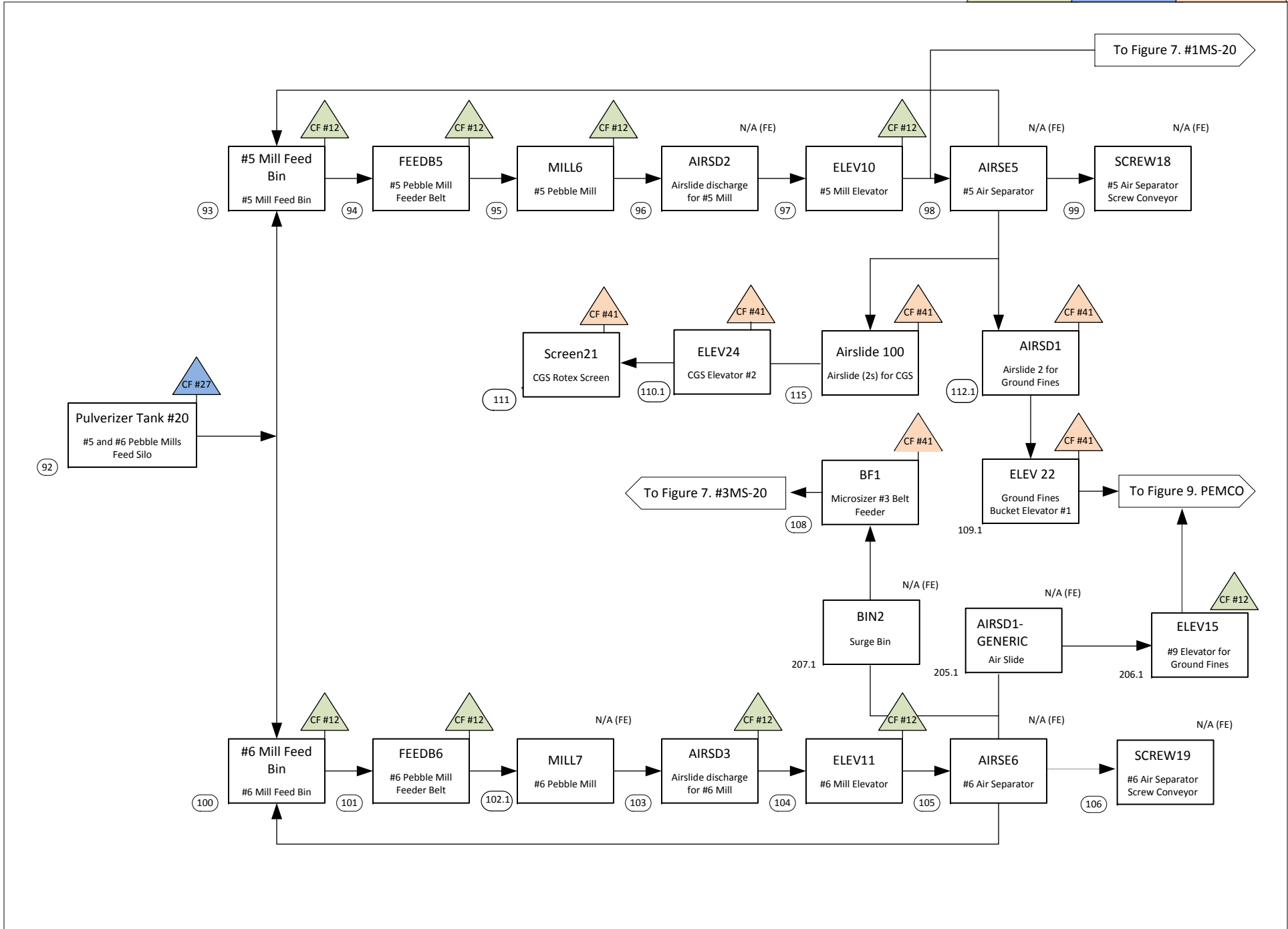


Figure 6. Milling - #5 and #6 Pebble Mills, and Coarse Ground Special Circuit

CF #12  
CFH 40T-20-B

CF #27  
Torit DF-T2-8

CF #41  
DFT2-4-155



**Figure 7. Micro-sizer Classification 10/20/30/40 Micron**

CF #42 DFT-3-6  
 CF #11 CFH 40T-20-B  
 CF #12 CFH 40T-20-B

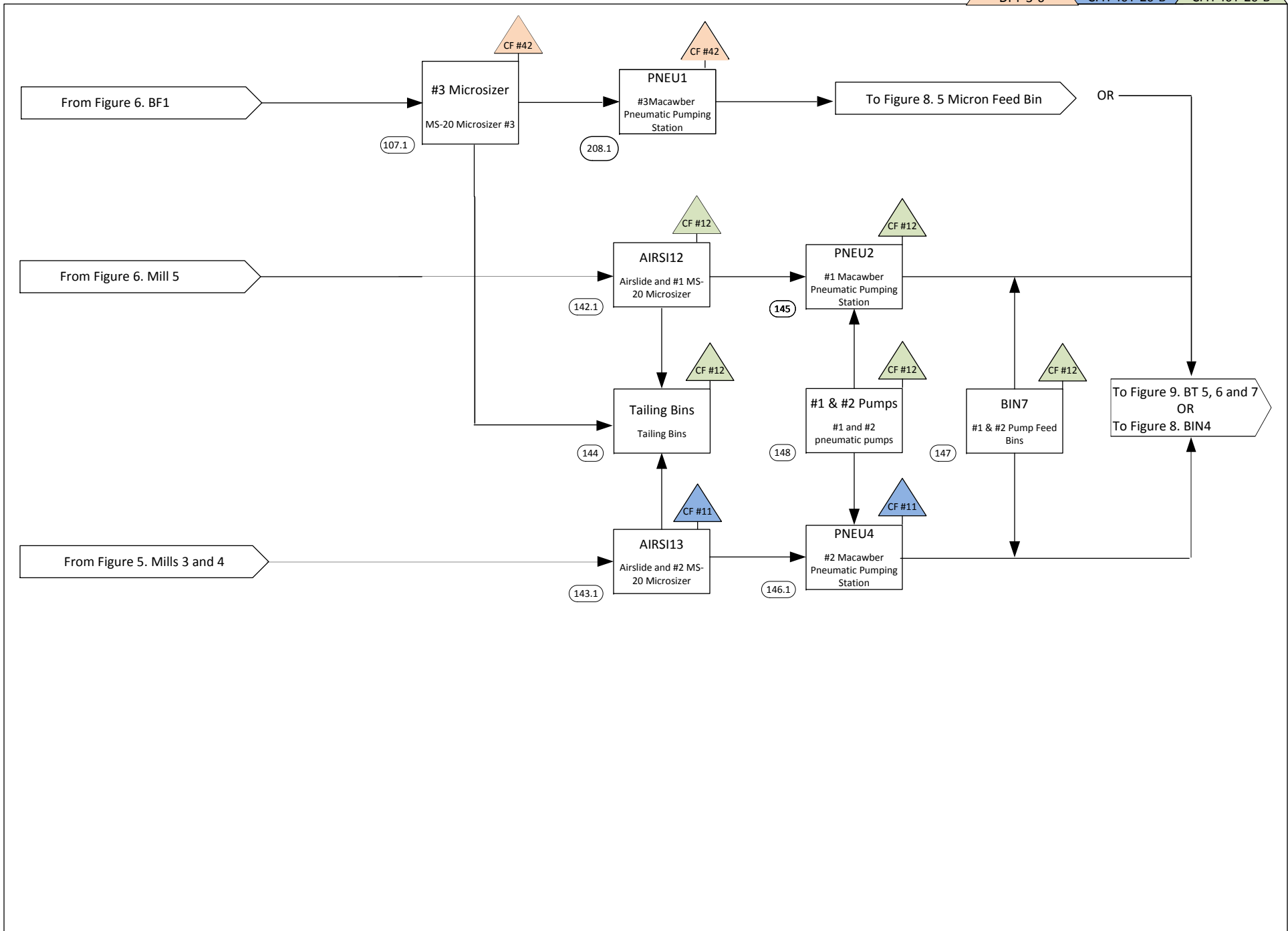
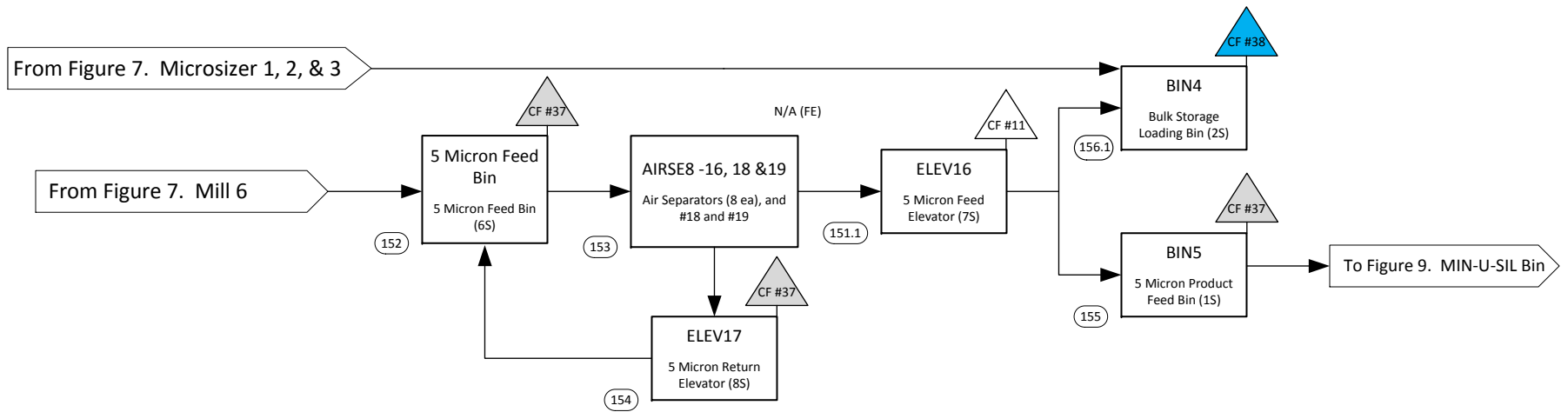




Figure 8. 5 Micron Classification, Loading and Packaging



**Figure 9. Loading and Packaging**

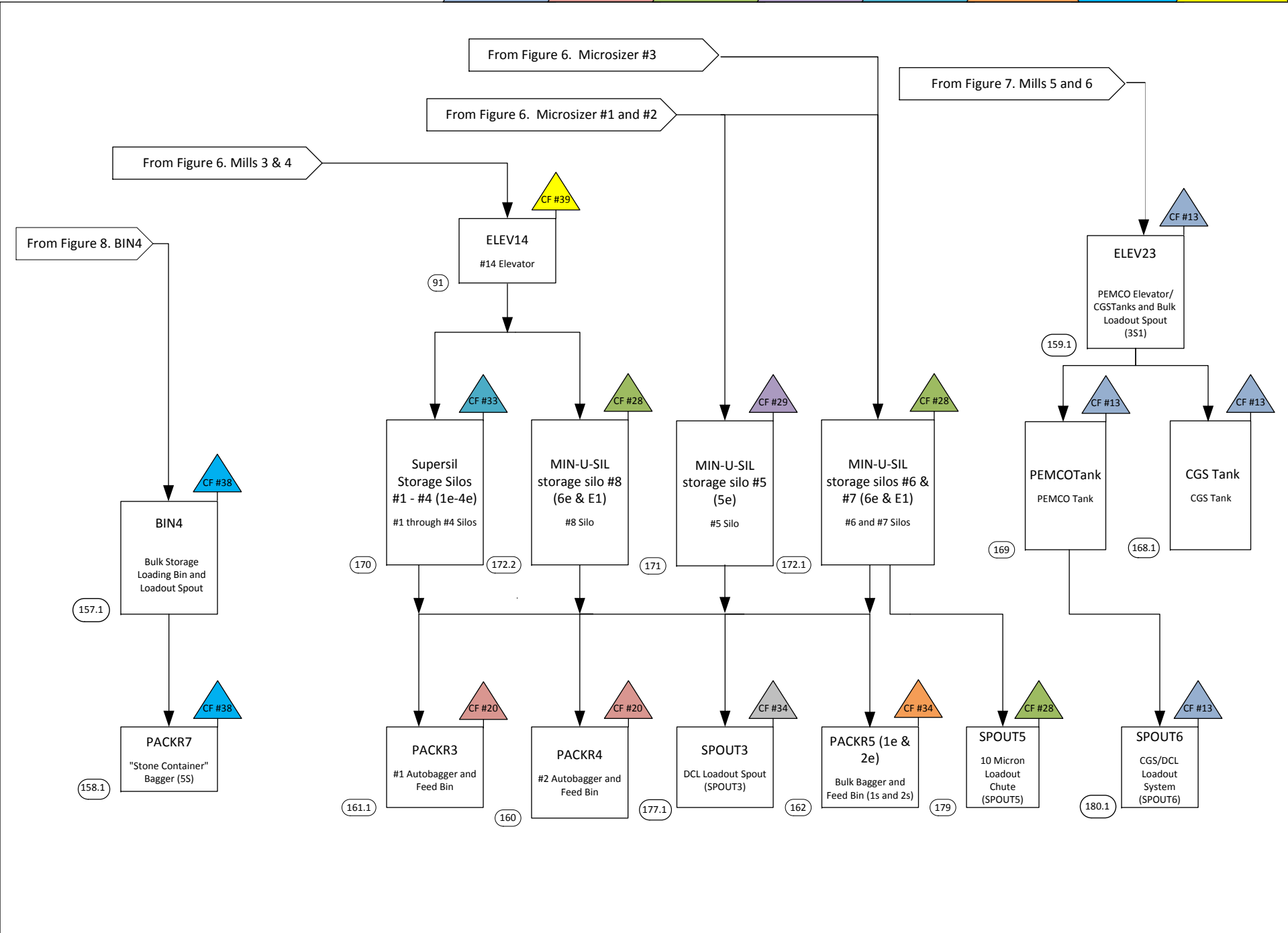
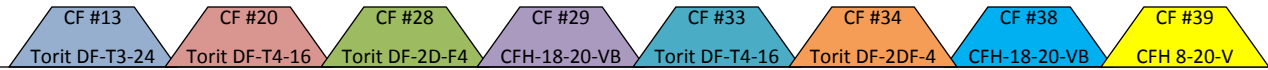
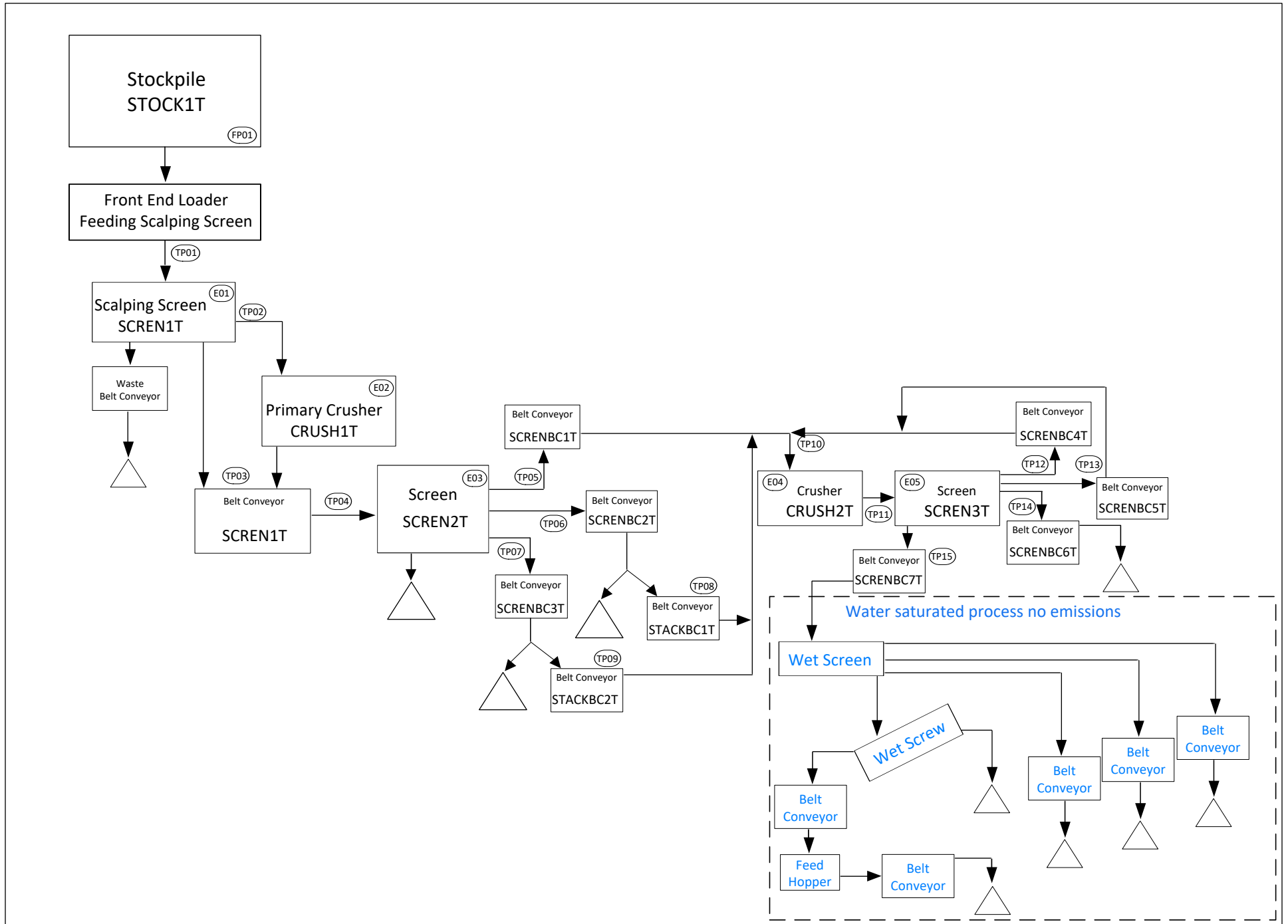


Figure 10. Limestone Processing Plant



Attachment D

Equipment Table

**ATTACHMENT D - Title V Equipment Table**  
**(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)**

<b>Process Flow Diagram Number</b>	<b>Emission Point ID</b>	<b>Control Device<sup>1</sup></b>	<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Design Capacity TPY</b>	<b>Year Installed/Modified</b>
<b>Primary Crushing Plant</b>						
1	N/A	N/A	VIBFD1	Primary Crusher Feed Bin and Vibratory Feeder	1000	Pre-1970
2	Stack #1	CF #1	CRUSH2	4' Jaw Crusher	800	Pre-1970
3	Stack #1	CF #1	CONV3	42" Short Belt under Primary Crusher	800	Pre-1970
4	Stack #1	CF #1	CONV2	42" Incline Belt	800	Pre-1970
5	N/A	N/A	CONV1	42" Stacker Belt to Reclaim Stockpile	800	Pre-1970
6	Reclaim Stockpile	N/A (PE)	Reclaim Stockpile	Reclaim Stockpile	800	Pre-1970
<b>Secondary Crushing Plant</b>						
7	N/A	N/A (PE)	VIBFD2	Vibratory Feeders #1, #2, #3, #4 and #5 in Reclaim Tunnel	400	Pre-1970
8	N/A	N/A (PE)	CONV4	36" Reclaim Conveyor	400	Pre-1970
9	N/A	N/A (FE)	CONV5	42" Conveyor to Secondary Crusher	400	Pre-1970
10	Stack #2	WSc #2	CRUSH3	Symons Secondary Crusher and Surge Bin	400	Pre-1970
11	N/A	N/A (FE)	CONV6	36" Conveyor	400	Pre-1970
12.1	N/A	N/A (FE)	CONV7	30" Transfer Conveyor	400	Pre-1970
13	N/A	N/A (FE)	CONV8	36" Conveyor to #2 Stone Tank	400	Pre-1970
<b>Wet Processing Plant (Rod Mill Building)</b>						
14	N/A	N/A (FE)	CONV12	24" #2 Stone Tank discharge conveyor C-1	200	Pre-1970
15	N/A	N/A (FE)	CONV13	24" Conveyor C-2	200	Pre-1970
16	N/A	N/A (FE)	CONV14	24" Conveyor C-3	200	Pre-1970
17	N/A	N/A (FE)	MILL1	Hardinge Rod Mill	200	Pre-1970
18	N/A	N/A (SS)	CONV15	18" Conveyor C-4 to Rod Mill Tailings	150	Pre-1970
19.1	N/A	N/A (FE)	SCREN1	METSO 8 x 20 Screen	200	Pre-1970
20	N/A	N/A	TANK2	Vessels, Bins, Tanks and Slurry Boxes in Rod Mill Building	200	Pre-1970
21	N/A	N/A (FE)	WETSE1 - WETSE5	#1, #2, #3, #4 and #5 Linatex Separators	200	Pre-1970
22	N/A	N/A (SS)	FERRO1	Ferro Filters	200	Pre-1970
23.1	N/A	N/A (SS)	CLASS4&7	Hydrosizers	200	Pre-1970
24	N/A	N/A (SS)	FCell	Outokumpo Flotation Cells	160	2004
25	N/A	N/A (FE)	CONV54	Feed Conveyor to Denver Ball Mill	50	2000
26	N/A	N/A (FE)	MILL8	Denver 4 x 8 Ball Mill	50	2000
27	N/A	N/A (SS)	PIPE1	Wet Process Sand Slurry Piping	200	Pre-1970
28	N/A	N/A (SS)	CONV18	30" Stationary Conveyor in Fluid Bed Drain Shed (Bldg #6)	200	Pre-1970

**ATTACHMENT D - Title V Equipment Table**  
**(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)**

<b>Process Flow Diagram Number</b>	<b>Emission Point ID</b>	<b>Control Device<sup>1</sup></b>	<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Design Capacity TPY</b>	<b>Year Installed/Modified</b>
29.1	N/A	N/A (FE)	CONV17	30" Shuttle Conveyor in Fluid Bed Drain Shed	200	Pre-1970
29.2	N/A	N/A (FE)	CONV19	30" Shuttle Conveyor in Fluid Bed Drain Shed	200	Pre-1970
30	N/A	N/A (FE)	CONV20 & CONV22	30" F-1 Feed Hopper Conveyor and 30" F-2 Feed Hopper Conveyor	200	1975
31	N/A	N/A (PE)	CONV21	24" C-1 Outside Conveyor	200	1975
32	N/A	N/A (PE)	CONV23	24" C-2 Outside Conveyor	200	1975
33	N/A	N/A (PE)	CONV24	24" C-3 Conveyor	200	1975
34.1	N/A	N/A	V1BFD4	C3 Belt, Vibratory Feeder	200	1975
35	Stack #3	WSc #3	DRYER #1 (3s)	Fluid Bed Dryer (71 MMBtu/hr)	200	1975
36	Stack #25	CF #25	CONV25	30" C-4 Tunnel Conveyor	200	1975
37	Stack #25	CF #25	SCREN16	Tyler Ty-Speed Shaker Screen	200	1995
<b>Wet Float Plant</b>						
38	N/A	N/A (SS)	Slurry Pumps	Slurry Pumps	25	Pre-1948
39	N/A	N/A (SS)	CYCLO4 & CYCLO5	#1 and #2 Wet Cyclones	25	Pre-1948
40	N/A	N/A (SS)	FERRO2	Ferro Filters	25	Pre-1948
41	N/A	N/A (SS)	CYCLO3	#4 Wet Cyclone	25	Pre-1948
42	N/A	N/A (SS)	Drain Shed	Drain Shed	25	Pre-1948
43	N/A	N/A (SS)	CONV46	24" Conveyor	25	Pre-1970
44	N/A	N/A (SS)	CONV47	24" Long Conveyor Belt	25	Pre-1970
45	N/A	N/A (BE)	CLASS5	Rake Classifier	25	Pre-1970
46	N/A	N/A (BE)	Conditioner	Conditioner	25	Pre-1970
47	N/A	N/A (BE)	Flotation	Flotation	25	Pre-1970
48	N/A	N/A	Vacuum Table	Vacuum Table	25	Pre-1970
49	N/A	N/A (BE)	CONV48	18" Thrower Conveyor Belt	25	Pre-1970
50	N/A	N/A (BE)	CONV50	30" Damp Loadout Conveyor Belt	25	Pre-1970
51	N/A	N/A (BE)	CONV49	24" Conveyor	25	Pre-1970
52	Stack #8	WSc #8	DRYER #2 (8S)	Rotary Dryer (17.1 MMBtu/hr)	25	Pre-1970
53	N/A	N/A (BE)	SCREW21	#1 Screw Conveyor	25	Pre-1970
54	Stack #9	CF #9	ELEV19	#1 Elevator	25	Pre-1970
56	Stack #9	CF #9	SCREN18 (1E)	#2 Rotex Screen (2S)	50	1999
57	N/A	N/A (BE)	SCREW22	#2 Screw Conveyor	25	Pre-1970
58	Stack #9	CF #9	ELEV20	#2 Elevator	25	Pre-1970

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<b>Process Flow Diagram Number</b>	<b>Emission Point ID</b>	<b>Control Device<sup>1</sup></b>	<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Design Capacity TPY</b>	<b>Year Installed/Modified</b>
59	Stack #9	CF #9	PACKR8 (1E)	BFS Bulk Bagger	30	1998
Milling Process						
60	Stack #27	CF #27	Pulverizer Tank #19	#1 through #4 Pebble Mills Feed Silo	150	Pre-1970
61	Stack #10	CF #10	SCREW3	Mills #1 and #2 Screw Conveyor	30	Pre-1970
62.1	Stack #11	CF #11	SCREW5	Cross Conveyor	30	Pre-1970
63.1	N/A	N/A (FE)	SCREW4	Mills #3 and #4 Screw Conveyor	30	Pre-1970
64	Stack #10	CF #10	#1 Mill Feed Bin	#1 Mill Feed Bin	100	Pre-1970
65	Stack #10	CF #10	#2 Mill Feed Bin	#2 Mill Feed Bin	100	Pre-1970
66.1	Stack #11	CF #11	#3 Mill Feed Bin	#3 Mill Feed Bin	100	Pre-1970
67.1	Stack #11	CF #11	#4 Mill Feed Bin	#4 Mill Feed Bin	100	Pre-1970
68	Stack #10	CF #10	FEEDB1	#1 Pebble Mill Feeder Belt	15	Pre-1970
69	Stack #10	CF #10	FEEDB2	#2 Pebble Mill Feeder Belt	15	Pre-1970
70.1	Stack #11	CF #11	FEEDB3	#3 Pebble Mill Feeder Belt	15	Pre-1970
71.1	Stack #11	CF #11	FEEDB4	#4 Pebble Mill Feeder Belt	15	Pre-1970
72.1	N/A	N/A (FE)	MILL2	#1 Pebble Mill	100	Pre-1970
73.1	N/A	N/A (FE)	MILL3	#2 Pebble Mill	100	Pre-1970
74.1	N/A	N/A (FE)	MILL4	#3 Pebble Mill	100	Pre-1970
75.1	N/A	N/A (FE)	MILL5	#4 Pebble Mill	100	Pre-1970
76	Stack #10	CF #10	SCREW6	#1 Mill Discharge Screw Conveyor	100	Pre-1970
77	Stack #10	CF #10	AIRSD7	Airslide for #2 Mill discharge	100	Pre-1970
78.1	Stack #11	CF #11	SCREW7	#3 Mill Discharge Screw Conveyor	100	Pre-1970
79.1	Stack #11	CF #11	AIRSD8	Airslide for #4 Mill discharge	100	Pre-1970
80	Stack #10	CF #10	ELEV6	#1 Mill Elevator	100	Pre-1970
81	Stack #10	CF #10	ELEV7	#2 Mill Elevator	100	Pre-1970
82.1	Stack #11	CF #11	ELEV8	#3 Mill Elevator	100	Pre-1970
83.1	Stack #11	CF #11	ELEV9	#4 Mill Elevator	100	Pre-1970
84	N/A	N/A (FE)	AIRSE1	#1 Air Separator	100	Pre-1970
85	N/A	N/A (FE)	AIRSE2	#2 Air Separator	100	Pre-1970
86	N/A	N/A (FE)	AIRSE3	#3 Air Separator	100	Pre-1970
87	N/A	N/A (FE)	AIRSE4	#4 Air Separator	100	Pre-1970
88	N/A	N/A (FE)	AIRSD9	Airslide for #1 Separator Feed	100	Pre-1970

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<b>Process Flow Diagram Number</b>	<b>Emission Point ID</b>	<b>Control Device<sup>1</sup></b>	<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Design Capacity TPY</b>	<b>Year Installed/Modified</b>
89	N/A	N/A (FE)	SCREW16	#3 Air Separator Screw Conveyor	100	Pre-1970
90	N/A	N/A (FE)	SCREW17	#4 Air Separator Screw Conveyor	100	Pre-1970
91	Stack #39	CF #39	ELEV14	#14 Elevator	150	Pre-1970
92	Stack #27	CF #27	Pulverizer Tank #20	#5 and #6 Pebble Mills Feed Silo	150	Pre-1970
93	Stack #12	CF #12	#5 Mill Feed Bin	#5 Mill Feed Bin	100	Pre-1970
94	Stack #12	CF #12	FEEDB5	#5 Pebble Mill Feeder Belt	15	Pre-1970
95	Stack #12	CF #12	MILL6	#5 Pebble Mill	100	Pre-1970
96	N/A	N/A (FE)	AIRSD2	Airslide discharge for #5 Mill	100	Pre-1970
97	Stack #12	CF #12	ELEV10	#5 Mill Elevator	100	Pre-1970
98	N/A	N/A (FE)	AIRSE5	#5 Air Separator	100	Pre-1970
99	N/A	N/A (FE)	SCREW18	#5 Air Separator Screw Conveyor	100	Pre-1970
100	Stack #12	CF #12	#6 Mill Feed Bin	#6 Mill Feed Bin	100	Pre-1970
101	Stack #12	CF #12	FEEDB6	#6 Pebble Mill Feeder Belt	15	Pre-1970
102.1	N/A	N/A (FE)	MILL7	#6 Pebble Mill	100	Pre-1970
103	Stack #12	CF #12	AIRSD3	Airslide discharge for #6 Mill	100	Pre-1970
104	Stack #12	CF #12	ELEV11	#6 Mill Elevator	100	Pre-1970
105	N/A	N/A (FE)	AIRSE6	#6 Air Separator	100	Pre-1970
106	N/A	N/A (FE)	SCREW19	#6 Air Separator Screw Conveyor	100	Pre-1970
108	Stack #41	CF #41	BF1	Microsizer #3 Belt Feeder	20	2005
109.1	Stack #41	CF #41	ELEV 22	Ground Fines Bucket Elevator #1	100	2005
110.1	Stack #41	CF #41	ELEV24	CGS Elevator #2	100	2005
111	Stack #41	CF #41	Screen21	CGS Rotex Screen	25	2005
112.1	Stack #41	CF #41	AIRSD1	Airslide 2 for Ground Fines	100	2005
115	Stack #41	CF #41	Airslide 100	Airslide (2s) for CGS	8	2005
205.1	N/A	N/A (FE)	AIRSD1-GENERIC	Generic EUID for Air Slides	100	N/A
206.1	Stack #12	CF #12	ELEV15	# 9 Bucket Elevator	100	Pre- 1970
207.1	N/A	N/A (FE)	BIN2	Surge Bin	100	Pre-1970
<b>Screening and Unground Sand Processing</b>						
	N/A	N/A (FE)	MOB-CONV	342D Mobile Conveyor	300	2017
	N/A	N/A (FE)	BE-03	Cristobalite Bucket Elevator #3	100	2017
	N/A	N/A (FE)	C Silo	Cristobalite Silo	150	2017



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55	Stack #7	CF #7	SCREN17 (1E)	#1 Rotex Screen (1S)	50	2012
119	Stack #6	CF #6	BE01 (E2)	Bucket Elevator #1	150	2012
120	Stack #6	CF #6	BE02 (E2)	Bucket Elevator #2	150	2012
121	Stack #6	CF #6	LS01 (FE3)	Dust Suppression Hopper (DSH) System Load out Spout	150	2012
122	Stack #25	CF #25	CONV26	24" #3 Dryer Conveyor	200	Pre-1975
123	Stack #25	CF #25	CONV27	24" #2 Tunnel Conveyor	200	Pre-1975
124	Stack #6	CF #6	ELEV4	#1 Elevator	200	Pre-1975
125	Stack #6	CF #6	VIBFD5	Grasshopper Vibrating Feeder	200	1973
126	Stack #6	CF #6	CONV39-41	#1 to #3 Magnet Rolls	200	Pre-1975
127	Stack #36	CF #36	SCREN7-9 & SCREN14-15 (IE)	#1 through #5 Rotex Screens (1S-5S)	375	1995-1997
128	Stack #6	CF #6	CONV 30	20" Tailings Conveyor	30	Pre-1975
129	Stack #6	CF #6	CONV29	#1 Dry Sand Conveyor	175	Pre-1975
130	Stack #7	CF #7	ELEV2	#3 Elevator	30	Pre-1975
131	Stack #7	CF #7	ELEV1	#2 Elevator	75	Pre-1975
132	Stack #7	CF #7	ELEV3	#4 Elevator	75	Pre-1975
133.1	Stack #7	CF #7	SCREN10-13 & SCREN2-4	SCREN10-13: #71 through #74 Rotex Screens, SCREN2-4: #61 and #62 Rotex Screens and Tyler Hummer Screen	75	Modified 1996 Pre-1975
134	Stack #7	CF #7	CONV31	24" #9 and #10 Tank Conveyor	75	Pre-1975
135	N/A	N/A (FE)	CONV32	24" # 11 and #12 Tank Conveyor	75	Pre-1975
136	N/A	N/A (FE)	CONV36	20" C-10 Conveyor	110	Pre-1975
137	N/A	N/A (FE)	CONV37	20" C-11 Conveyor	110	Pre-1975
138	Stack #7	CF #7	CONV33	24" #1 Pulverizer Tank Belt Conveyor	200	Pre-1975
139	N/A	N/A (FE)	CONV34	24" #2 Pulverizer Tank Belt Conveyor	200	Pre-1975
140	Stack #27	CF #27	CONV51	24" 30 Mesh Loadout Conveyor	200	Pre-1975
141	Stack #40	CF #40	PACKR1	Packaging Machine for Whole Grain Sand	36	Pre-1975
Classification (10/15/30/40 Micron)						
107.1	Stack #42	CF #42	Microsizer #3	MS-20 Microsizer #3	25	2005
142.1	Stack #12	CF #12	AIRSI12	Airslide and #1 MS-20 Microsizer	85	1996
143.1	Stack #11	CF #11	AIRSI13	Airslide and #2 MS-20 Microsizer	85	1996
144	Stack #12	CF #12	Tailing Bins	Tailing Bins	130	Pre-1975
145	Stack #12	CF #12	PNEU2	#1 Macawber Pneumatic Pumping Station	15	1996

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Process Flow Diagram Number	Emission Point ID	Control Device <sup>1</sup>	Emission Unit ID	Emission Unit Description	Design Capacity TPY	Year Installed/Modified
146.1	Stack #11	CF #11	PNEU4	#2 Macawber Pneumatic Pumping Station	15	1996
147	Stack #12	CF #12	BIN7	#1 & #2 Pump Feed Bins	15	Pre-1975
148	Stack #12	CF #12	#1 & #2 Pumps	#1 and #2 pneumatic pumps	15	1996
208.1	Stack #42	CF #42	PNEU1	#3 Macawber Pneumatic Pumping Station	15	2017
5 Micron Classification						
151.1	Stack #11	CF #11	ELEV16	5 Micron Feed Elevator (7S)	150	1996
152	Stack #37	CF #37	5 Micron Feed Bin	5 Micron Feed Bin (6S)	150	1996
153	N/A	N/A (FE)	AIRSE8 -16, 18 & 19	Air Separators (8 ea), and #18 and #19	20	1973
154	Stack #37	CF #37	ELEV17	5 Micron Return Elevator (8S)	150	1996
155	Stack #37	CF #37	BIN5	5 Micron Product Feed Bin (1S)	10	1996
156.1	Stack #38	CF #38	BIN4	Bulk Storage Loading Bin(2S)	10	1996
158.1	Stack #38	CF #38	PACKR7	"Stone Container" Bagger (5S)	15	1996
159.1	Stack #13	CF #13	ELEV23	PEMCO Elevator/FCP Tanks and Bulk Loadout Spout (3S1)	100	Pre 1983
160	Stack #20	CF #20	PACKR4	#2 Autobagger and Feed Bin	20	1981
161.1	Stack #20	CF #20	PACKR3	#1 Autobagger and Feed Bin	20	1981
162	Stack #34	CF #34	PACKR5 (1e & 2e)	Bulk Bagger and Feed Bin (1s and 2s)	15	1988
Limestone System						
	FP01	N/A (WS)	STOCK1	Stockpile	~21	2021
	E02	N/A (WS)	CRUSH1	Primary Crusher	~21	2021
	E04	N/A (WS)	CRUSH2	Secondary cone crusher	~21	2021
	E01	N/A (WS)	SCREN1	scalping screener	~21	2021
	E03	N/A (WS)	SCREN2	screener	~21	2021
	E05	N/A (WS)	SCREN3	screener	~21	2021
	TP01	N/A (WS)	TRUCK1	Front end loader feeding scalping screen	~21	2021
	TP02	N/A (WS)	FEEDER1	Screen feeding crusher	~21	2021
	TP03	N/A (WS)	CRUSH1	Crusher onto belt conveyor	~21	2021
	TP04	N/A (WS)	SCREN1	Belt conveyor feeding screener	~21	2021
	TP05	N/A (WS)	SCRENBC1	Conveyor from Screener	~21	2021
	TP06	N/A (WS)	SCRENBC2	Conveyor from Screener	~21	2021
	TP07	N/A (WS)	SCRENBC3	Conveyor from Screener	~21	2021
	TP08	N/A (WS)	STACKBC1	Conveyor belt transfer	~21	2021

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**(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)**

<b>Process Flow Diagram Number</b>	<b>Emission Point ID</b>	<b>Control Device<sup>1</sup></b>	<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Design Capacity TPY</b>	<b>Year Installed/Modified</b>
	TP09	N/A (WS)	STACKBC2	Conveyor belt transfer	~21	2021
	TP10	N/A (WS)	CRUSH2	Conveyor belt Feeding Crusher	~21	2021
	TP11	N/A (WS)	CRUSHSCR1	Crushing Feeding Screener	~21	2021
	TP12	N/A (WS)	SCRENBC4	Conveyor from Screener	~21	2021
	TP13	N/A (WS)	SCRENBC5	Conveyor from Screener	~21	2021
	TP14	N/A (WS)	SCRENBC6	Conveyor from Screener	~21	2021
	TP15	N/A (WS)	SCRENBC7	Conveyor from Screener	~21	2021
<b>Storage Structures</b>						
157.1	Stack #38	CF #38	BIN4 SPOUT	Bulk Storage Loading Bin and Loadout Spout (2S)	10	1996
163.1	Stack #7	CF #7	Tank #7 & Tank #8	Storage Tanks #7 and Tank #8 at the New Screen Tower	150	Pre-1948
163.2	Stack #7	CF #7	Tank #15 & Tank #16	Storage Tank #15 and Tank #16 at New Screen Tower	150	Pre-1948
164.1	Stack #7	CF #7	Tanks #13 & #17	Storage tanks #13 and #17 at the New Screen Tower	150	Pre-1970
165	Stack #27	CF #27	Tanks #9 - #12	Storage tanks #9, #10, #11 & #12 at the New Screen Tower	150	Pre-1970
166.1	Stack #7	CF #7	Tanks #14 & #18	Storage tanks #14 and #18 at the New Screen Tower	150	Pre-1970
167	Stack #27	CF #27	Steel Tank #21	Steel Tank at the New Screen Tower	100	Pre-1970
168.1	Stack #13	CF #13	CGS Tank	CGS Tank	800	1998
169	Stack #13	CF #13	PEMCOTank	PEMCO Tank	250	Pre 1983
170	Stack #33	CF #33	Supersil Storage Silos #1 - #4 (1e-4e)	#1 through #4 Silos	125	1984
171	Stack #29	CF #29	MIN-U-SIL storage silo #5 (5e)	#5 Silo	125	1984
172.1	Stack #28	CF #28	MIN-U-SIL storage silos #6 & #7 (6e & E1)	#6 and #7 Silos	100	1984, 1999
172.2	Stack #28	CF #28	MIN-U-SIL storage silo #8 (6e & E1)	#8 Silo	100	1984, 1999
173.1	Stack #9	CF #9	ISTANK18	Concrete Tank at the Float Plant	25	Pre-1970
174	Stack #9	CF #9	Steel Storage Tank	Steel Tank at the Float Plant	25	Pre-1970
175	Stack #27	CF #27	SPOUT1	30 Mesh Loadout Spout (SPOUT1)	150	Pre-1970
176	Stack #27	CF #27	SPOUT2	Dry Sand Loadout Spout (SPOUT2)	150	Pre-1970
177.1	Stack #34	CF #34	SPOUT3	DCL Loadout Spout (SPOUT3)	200	Pre-1970
178	Stack #9	CF #9	SPOUT4	Float Plant Loadout Spout (SPOUT4)	150	Pre-1970
179	Stack #28	CF #28	SPOUT5	10 Micron Loadout Chute (SPOUT5)	150	Pre-1970
180.1	Stack #13	CF #13	SPOUT6	PEMCO/DCL Loadout System (SPOUT6)	250	Pre-1970
181	N/A	N/A (FE)	QROK SPOUTS	Q ROK Bulk Loading Spouts	150	Pre-1970

**ATTACHMENT D - Title V Equipment Table**  
**(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)**

<b>Process Flow Diagram Number</b>	<b>Emission Point ID</b>	<b>Control Device<sup>1</sup></b>	<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Design Capacity TPY</b>	<b>Year Installed/Modified</b>
203.1	N/A	N/A	#1 Stone Tank	#1 Stone Tank (Inside Building)	400	Before 1976
204.1	N/A	N/A	#2 Stone Tank	#2 Stone Tank (Inside Building)	400	Before 1976
Miscellaneous						
182	N/A	N/A	Roads	Unpaved Quarry Haul Roads, and Paved and Unpaved Plant Roadways	N/A	Pre-1970
N/A	N/A	N/A	Stockpile	Stockpile	N/A	Pre-1970
	N/A	N/A	Golf Sand Stockpile	Stockpile	N/A	Pre-1970
184	N/A	N/A	Float Sand Stockpile	Stockpile	N/A	Pre-1970
N/A	N/A	N/A	Quarry	Blasting Emissions	N/A	Pre-1970
Liquid Storage Tanks						
185	T1	N/A	Tank No. 1	Diesel Fuel Tank	10000	Before 1976
186	T2	N/A	Tank No. 2	Used Oil Tank at Maintenance garage	275	Before 1976
187	T3	N/A	Tank No. 3	Used Oil Tank at Maintenance garage	275	Before 1976
188	T4	N/A	Tank No. 4	#1 Oil Tank at Maintenance garage	275	Before 1976
189	T5	N/A	Tank No. 5	#2 Oil Tank at Maintenance garage	275	Before 1976
190	T6	N/A	Tank No. 6	#3 Oil Tank at Maintenance garage	275	Before 1976
191	T7	N/A	Tank No. 7	#4 Oil Tank at Maintenance garage	275	Before 1976
192	T8	N/A	Tank No. 8	Recycled Oil Tank near Float Plant	100000	1975
193	T11	N/A	Tank No. 11	Kerosene Tank at C & R Shop	275	1995
194	T12	N/A	Tank No. 12	Gasoline Tank at Office Building	1000	1995
195	T13	N/A	Tank No. 13	Lube Oil Tank at Secondary Crusher	300	Before 1976
196	T16	N/A	Tank No. 16	Recycled Oil	30000	2003
197	T17	N/A	Tank No. 17	Recycled Oil	30000	2003
198	T24	N/A	Tank No. 24	Petroleum Sulfonate (Conditioner) Tank at Float Plant	275	Before 1976
199	T25	N/A	Tank No. 25	Two Propane Tanks at the electric shop 30,000 gallon each	60000	Before 1976
200	T26	N/A	Tank No. 26	Propane Tank at the Quarry	2000	1999
201	T27	N/A	Tank No. 27	Propane Tank at #6 Oil Building	1000	Before 1976
202	T28	N/A	Tank No. 28	Two Propane Tanks at the C&R Shop	1000	Before 1976
N/A	T29	N/A	Tank No. 29	Sodium Hydroxide Tank	8,200	Before 1976
N/A	T30	N/A	Tank No. 30	Sulfuric Acid Tank	6,000	Before 1976
N/A	T31	N/A	Tank No. 31	Floculent Tank	550	Before 1976
N/A	T32	N/A	Tank No. 32	Anti-foam Tank	2,500	Before 1976

**ATTACHMENT D - Title V Equipment Table**  
**(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)**

<b>Process Flow Diagram Number</b>	<b>Emission Point ID</b>	<b>Control Device<sup>1</sup></b>	<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Design Capacity TPY</b>	<b>Year Installed/Modified</b>
N/A	T33	N/A	Tank No. 33	Promoter Tank	12,000	Before 1976

<sup>1</sup>For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

**Notes:**

Redlined rows have the revised information immediately below the redlined row with the corresponding process flow ID number and a decimal representing that this row's information has been revised.

Equipment design capacities are in units of tons per hour. Liquid Storage Tank design capacities are in units of gallons.

**Abbreviations:**

FE = Full Enclosure, PE = Partial Enclosure, BE = Building Enclosure, T = Tunnel or Underground, IMC = Inherent Moisture Content(1-5%), MC = Moisture Content, SS = Saturated Sand(60% moisture), WS = Water Spray, WT = Water Truck, MD = Minimized Drop Height, EL = Enclosed Loading Station, WSc = Wet Scrubber, CF = Cartridge Filter.

Attachment E

Emission Unit Forms

<i>Emission Unit Description</i>			
<b>Emission unit ID number:</b> VIBFD1, CRUSH2, CONV3, CONV2, CONV1, Reclaim Stockpile	<b>Emission unit name:</b> Primary Crushing Plant	<b>List any control devices associated with this emission unit:</b> CF #1	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Primary Crushing Plant (Stack #1) and associated fugitive emissions			
<b>Manufacturer:</b> NA	<b>Model number:</b> NA	<b>Serial number:</b> NA	
<b>Construction date:</b> Pre-1970	<b>Installation date:</b> Pre-1970	<b>Modification date(s):</b> NA	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 1000 TPH			
<b>Maximum Hourly Throughput:</b> 1000	<b>Maximum Annual Throughput:</b> 8,760,000 TPY	<b>Maximum Operating Schedule:</b> 8760 Hours/Year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? No</b>		<b>If yes, is it?</b>	
<b>Maximum design heat input and/or maximum horsepower rating:</b>		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--

Particulate Matter (PM <sub>2.5</sub> )	--	0.727
Particulate Matter (PM <sub>10</sub> )	--	4.800
Total Particulate Matter (TSP)	--	12.874
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	--
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
ted Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

**Notes:**

Allowable PM Stack Emissions (Type 'a' Source Operation)  
 [45CSR§7-4.1] [Stacks 1, 7, 10, 11, 12, 13, 20, 27, 39, 40, Wsc#2]  
 Total emissions are for all units associated with Primary Crushing process.

***Applicable Requirements***

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

**Applicable Requirements**

6.1.2. The following Non-NSPS Fabric Filter pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the filters to attain the required minimum particulate removal efficiency. Filter pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within 0.1 inch water gauge. An excursion shall be defined as when the filter pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the filter and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0”

According to the CAM plan submitted, the differential pressure gauges for the filters shall be operated continuously during operation of the emission units. [40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stacks #1, 7, 10, 11, 12, 13, 20, 27, 39, 40]

Permit Shield



**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

#### **Monitoring Requirements**

Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1. [45CSR§30-5.1c]

#### **Testing Requirements**

NA [R30-06500001-2014 (MM01 & MM02) sections 6.3.]

#### **Recordkeeping Requirements**

Recordkeeping will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.4.1., 3.4.2., 3.4.3 and 3.4.4. [45CSR§30-5.1c]

The monitoring required in R30-06500001-2014 (MM01 & MM02) sections 6.2.2 will be recorded. [45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter and the wet scrubber during operation on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

Qualified personnel shall perform visual inspections of the fabric filters and wet scrubber control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters and wet scrubber. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

General recordkeeping requirements. (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements. [40 C.F.R. §64.9(b); 45CSR§30-5.1.c.]

#### **Reporting Requirements**

Reporting will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.5.6 and 3.5.8. [45CSR§30-5.1c]

General reporting requirements.

(1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

<i>Emission Unit Description</i>			
<b>Emission unit ID number:</b> VIBFD2, CONV4, CONV5, CRUSH3, CONV7, CONV6, CONV8	<b>Emission unit name:</b> Secondary Crushing Plant	<b>List any control devices associated with this emission unit:</b> WSc #2	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Secondary Crushing Plant (Stack #2) and associated fugitive emissions			
<b>Manufacturer:</b> NA	<b>Model number:</b> NA	<b>Serial number:</b> NA	
<b>Construction date:</b> Pre-1970	<b>Installation date:</b> Pre-1970	<b>Modification date(s):</b> NA	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 400			
<b>Maximum Hourly Throughput:</b> 400	<b>Maximum Annual Throughput:</b> 3,504,000 TPY	<b>Maximum Operating Schedule:</b> 8760 Hours/Year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? No</b>		<b>If yes, is it?</b>	
<b>Maximum design heat input and/or maximum horsepower rating:</b>		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--

Particulate Matter (PM <sub>2.5</sub> )	--	0.332
Particulate Matter (PM <sub>10</sub> )	--	2.190
Total Particulate Matter (TSP)	--	5.445
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	--
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
ted Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

**List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).**

**Notes:**

Allowable PM Stack Emissions (Type 'a' Source Operation)  
 [45CSR§7-4.1] [Stacks 1, 7, 10, 11, 12, 13, 20, 27, 39, 40, Wsc#2]  
 Total emissions are for all units associated with Secondary Crushing process.

**Applicable Requirements**

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

**Applicable Requirements**

The following scrubber pressure drop range obtained from stack test and historical data is an indicator of compliance for the scrubber to attain the required minimum particulate removal efficiency. Scrubber pressure drop shall be monitored at least once per day. An excursion shall be defined as when the scrubber pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the scrubber and corrective actions shall be taken to return the pressure drop within the following range: Wsc#2, Wet Scrubber: 1.5-7.0 (in H2O)

According to the CAM plan submitted, the pressure drop across the wet scrubber shall be measured continuously during operation of the emission units. [40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Wsc#2]

Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

### **Monitoring Requirements**

Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1. [45CSR§30-5.1c]

6.2.2. The wet scrubber Wsc#2 shall be observed daily during periods of facility operation for a sufficient time interval to determine if the unit has any visible emissions using 40 C.F.R. 60 Appendix A, Method 22. If visible emissions are observed, visible emissions evaluations in accordance with 45CSR§7A shall be conducted as soon as practicable, but no later than one week from the time of the observation. A visible emissions evaluations in accordance with 45CSR7A shall not be required under condition Section 6.2.2 if the visible emissions condition is corrected in a timely manner; the scrubber is operating at normal operating conditions; and, the cause and corrective measures taken are recorded. [45CSR§30-5.1c] [Wsc#2]

### **Testing Requirements**

NA [R30-06500001-2014 (MM01 & MM02) sections 6.3.]

### **Recordkeeping Requirements**

Recordkeeping will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.4.1., 3.4.2., 3.4.3 and 3.4.4. [45CSR§30-5.1c]

The monitoring required in R30-06500001-2014 (MM01 & MM02) sections 6.2.2 will be recorded. [45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter and the wet scrubber during operation on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

Qualified personnel shall perform visual inspections of the fabric filters and wet scrubber control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters and wet scrubber. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

General recordkeeping requirements. (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements. [40 C.F.R. §64.9(b); 45CSR§30-5.1.c.]

### **Reporting Requirements**

Reporting will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.5.6 and 3.5.8. [45CSR§30-5.1c]

General reporting requirements.

(1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

(2) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R.

§70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(iii) A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> CONV12, CONV13, CONV14, MILL1, CONV15, SCREN1, TANK2, WETSE1 - WETSE5, FERRO1, CLASS4&7, FCell, CONV54, MILL8, PIPE1, CONV18, CONV17, CONV19, CONV20 & CONV22, CONV21, CONV23, CONV24, V1BFD4, DRYER #1 (3s), CONV25, SCREN16	<b>Emission unit name:</b> Wet Processing Plant (Rod Mill Building)	<b>List any control devices associated with this emission unit:</b> WSc #3, CF#25	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Dryers - Fluid Bed Dryer (3S), Stack #3, Wet Processing Plant and associated fugitive emissions.			
<b>Manufacturer:</b> NA	<b>Model number:</b> NA	<b>Serial number:</b> NA	
<b>Construction date:</b> 1975	<b>Installation date:</b> 1975	<b>Modification date(s):</b> NA	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 200			
<b>Maximum Hourly Throughput:</b> 200	<b>Maximum Annual Throughput:</b> 1,752,000 TPY	<b>Maximum Operating Schedule:</b> 8760 Hours/Year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? Yes</b>		<b>If yes, is it?</b> propane, #2 Fuel Oil, #4 Fuel Oil, #5 Fuel Oil, #6 Fuel Oil, natural gas and Recycled Fuel Oil	
<b>Maximum design heat input and/or maximum horsepower rating:</b> 71 MMBtu/hr (HHV)		<b>Type and Btu/hr rating of burners:</b> 71,000,000 Btu/hr (HHV)	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas & Propane	negligible	negligible	1020 BTU/scf
Recycled Fuel Oil	1.5 %	negligible	150,000 BTU/gal
Distillate Oils	1.5 %	negligible	150,000 BTU/gal
Residual Oils	0.2 %	0.05-0.1	140,000 BTU/gal

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	13.750
Nitrogen Oxides (NO <sub>x</sub> )	--	96.350
Lead (Pb)	--	0.210
Particulate Matter (PM <sub>2.5</sub> )	--	76.559
Particulate Matter (PM <sub>10</sub> )	--	96.688
Total Particulate Matter (TSP)	--	98.781
Sulfur Dioxide (SO <sub>2</sub> )	--	267.000
Volatile Organic Compounds (VOC)	--	1.270
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
All	--	2.185
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b>		
<b>Notes:</b>		
Total emissions are for all units associated with Wet Processing Plant.		
Max emissions of each fuel type for Dryer #1 for every specific pollutant to conservatively estimate PTE.		
<b><i>Applicable Requirements</i></b>		



**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

**Applicable Requirements**

The Fluid Bed dryer (3S) and the Rotary dryer (8S) shall burn the following fuels: propane, #2 Fuel Oil, #4 Fuel Oil, #5 Fuel Oil, #6 Fuel Oil, natural gas and Recycled Fuel Oil. [45CSR13, R13-0715, A.2] [3S, 8S]

The following sulfur limits shall not be exceeded: #2 Fuel Oil shall have a maximum of 0.2% S by weight. #4, # 5 and #6 Fuel Oil and Recycled oil shall have a maximum of 1.5 % sulfur by weight. [45CSR13, R13-0715, A.3] [3S, 8S]

Combined emissions from the Fluid Bed Dryer (3S) and Rotary Dryer (8S) shall not exceed the following annual limitations in Tons per year (TPY):

Particulate Matter: 95.48

SO<sub>2</sub>: 267.0

NO<sub>x</sub>: 96.35

VOC: 1.27

CO: 13.75

[45CSR13, R13-0715, A.6] [3S, 8S]

The fuel rating of the recycled oil shall not exceed 150,000 BTU/gallon. [45CSR13, R13-0715, A.7] [3S, 8S]

The following conditions shall be followed by the permittee for the use of Recycled Oil as dryer fuel:

a. The registrant shall not receive, store, burn or fire any recycled oil which is considered a hazardous waste or does not meet the used oil specifications below (40 C.F.R. 279.11, Table 1 & Recycled Oil specification provided by U.S.Silica). The burning of recycled oil that does not meet these specifications shall constitute a violation of 45CSR25, 33CSR20 and the requirements, provisions, standards and conditions of this Permit.

**Maximum Allowable Specification**

Arsenic: <5.0 ppm

Cadmium: <2.0 ppm

Chromium:<10.0 ppm

Lead: <100.0 ppm

PCBs: <2.0 ppm

Total Halogen: <1000.0 ppm

Flash Point: >100.0 Degrees F

b. The registrant shall receive a chemical analysis with each shipment or delivery of recycled oil from the supplier or marketer. The analysis shall identify the name and address of the supplier or marketer, the supplier or marketer's USEPA Identification Number and the following used or recycled oil information:

Date of shipment or delivery

Quantity received

Arsenic content

Cadmium content

Chromium content

Lead content

PCB content

Total Halogen content

Flash point

Sulfur content

c. The Director or his or her duly authorized representative may conduct or require the permittee to conduct detailed chemical analyses of any used or recycled oil received, stored or fired in the dryer burner. [45CSR13, R13-0715,

A.9] [3S, 8S]

The permitted facility shall comply with all provisions of 45CSR10, provided that the permittee shall comply with any more stringent requirements as may be set forth under Sections 4.1.1 to 4.1.7, 4.2.1, 4.4.1 to 4.4.4 of the permit. The principal provisions of 45CSR10 are as follows:

§45-10-3.3 - Maximum Allowable Emission Rates for Similar Units in All Priority III Regions Except Region IV.

No person shall cause, suffer, allow, or permit the discharge of sulfur dioxide into the open air from all stacks located at one plant, measured in terms of pounds per hour, in excess of the amount determined as follows:

(3.3.f) - For Type 'b' and Type 'c' fuel burning units, the product of 3.2 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour.

§45-10-3.4.a. - Unless otherwise approved by the Director, the maximum allowable emission rate for an individual stack shall not exceed by more than twenty-five percent (25%) the emission rate determined by prorating the total allowable emission rate based on the basis of individual unit heat input at design capacity for all fuel burning units discharging through that stack.

§45-10-4.1. - No person shall cause, suffer, allow, or permit, the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations.

§45-10-8.2.a. - At the request of the Director the owner and/or operator of a source shall install such stack gas monitoring devices as the Director deems necessary to determine compliance with the provisions of this rule. The data from such devices shall be readily available at the source location or such other reasonable location that the Director may specify. At the request of the Director, or his or her duly authorized representative, such data shall be made available for inspection or copying. Failure to promptly provide such data shall constitute a violation of this rule. [45CSR13, R13-0715, B.4] [3S, 8S]

At such reasonable times as the Director may designate, the owner or operator of any fuel burning unit(s), manufacturing process source(s) or combustion source(s) may be required to conduct or have conducted tests to determine the compliance of such source(s) with the emission limitations of sections 45CSR§§10-3, 4 or 5. Such tests shall be conducted in accordance with the appropriate test method set forth in 40 CFR Part 60, Appendix A, Method 6, Method 15 or other equivalent EPA testing method approved by the Director. The Director, or his or her duly authorized representative, may at his or her option witness or conduct such tests. Should the Director exercise his or her option to conduct such tests, the operator will provide all necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices. [45CSR§10-8.1a] [3S, 8S]

The Director, or his duly authorized representative, may conduct such other tests as he or she may deem necessary to evaluate air pollution emissions other than those noted in section 45CSR§10-3. [45CSR§10-8.1b] [3S, 8S]

The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) shall demonstrate compliance with sections 45CSR§§10-3, 4 and 5 of this rule by testing and /or monitoring in accordance with one or more of the following: 40 CFR Part 60, Appendix A, Method 6, Method 15, continuous emissions monitoring systems (CEMS) or fuel sampling and analysis as set forth in an approved monitoring plan for each emission unit. [45CSR§10-8.2c] [3S, 8S]

Monitoring plans pursuant to subsection 45CSR§10-8.2.c shall be submitted to the Director within six (6) months of the effective date of this rule. Approval or denial of such plans shall be within twelve (12) months of the effective date of this rule. (Monitoring Plan approved on April 25, 2003. Compliance with terms and conditions of 45CSR13, R13-0715F assures compliance with 45CSR10 and 10A ) [45CSR§10-8.2.c.2] [3S, 8S]

The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) subject to sections 45CSR§§10-3, 4 or 5 shall maintain on-site a record of all required monitoring data as established in a monitoring plan pursuant to subdivision 45CSR§10-8.2.c. Such records shall be made available to the Director or his duly authorized representative upon request. Such records shall be retained on-site for a minimum of five years.

[45CSR§10-8.3.a.] [3S, 8S]

The owner or operator shall submit a periodic exception report to the Director, in a manner specified by the Director. Such an exception report shall provide details of all excursions outside the range of measured emissions or monitored parameters established in an approved monitoring plan and shall include, but not be limited to, the time of the excursion, the magnitude of the excursion, the duration of the excursion, the cause of the excursion and the corrective action taken. [45CSR§10-8.3.b.] [3S, 8S]

The following scrubber pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the scrubber to attain the required minimum particulate removal efficiency. Scrubber pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within 0.1 inch water gauge. An excursion shall be defined as when the scrubber pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the scrubber and corrective actions shall be taken to return the pressure drop within the following range: 3S: 2.0 to 5.8 (in H<sub>2</sub>O) 8S: 0.5 to 2.0 (in H<sub>2</sub>O)

According to the CAM plan submitted, the pressure gauges on the scrubbers shall be operated continuously during operation of the dryers.

[40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [3S, 8S]

5.1.6.2. In accordance with the requirements of 40CFR60, Subpart OOO, the maximum particulate (PM) emissions from air pollution control device CF#25 shall not exceed 0.022 grains per dry standard cubic foot (0.05 grams per dry standard meter). [45CSR13, R13-2015, A.2] [Stack # 25]

5.1.6.3. The maximum hourly and annual rate of sand to the Trash Vibrating Conveyor (SCREEN), Equipment ID No. TS1(SCREEN 16), shall not exceed 220.0 tons/hour and 1,927,200 tons/year. [45CSR13, R13-2015, A.3] [SCREEN16]

5.1.6.4. The Trash Vibrating Conveyor (SCREEN), Equipment ID No. TS1, shall be controlled at all times of operation with a cartridge filter, Control Equipment ID No. CF#25. [45CSR13, R13-2015, A.4] [CF#25]

5.1.6.5. The permittee shall operate the cartridge filter, Control Equipment ID No.CF#25, as outlined in Permit Application R13-2015. [45CSR13, R13-2015, A.5] [CF#25]

Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

#### **Monitoring Requirements**

Compliance with Section 3 of 45CSR7 shall be determined by conducting daily visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for the scrubber. These observations shall be conducted during periods of normal facility operation for a sufficient time interval to determine if the unit has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22. If sources of visible emissions are identified during the survey, the permittee shall conduct an opacity evaluation as outlined in 45CSR7A-2.1.a,b, within 24 hours. A 45CSR7A-2.1.a,b evaluation shall not be required if the visible emission condition is corrected in a timely manner and the units are operated at normal operating conditions with no visible emissions being observed.

Records shall be maintained on site reporting the results of each test. Said opacity evaluations of sources identified during the Method 22 survey shall only be conducted by an employee or contractor certified in 40CFR60 Appendix A, Method 9, Visible Emission observations. Upon observing any visible emissions in excess of twenty percent (20%) opacity, or excess of forty (40%) for any period or periods aggregating more than five (5) minutes in any sixty (60) minute period, the Company shall submit a written report, certified by a responsible official, to the Director of the Division of Air Quality within five (5) days after taking said reading. When in compliance on a daily basis for four (4) consecutive weeks, then the observation frequency shall be decreased to a once-a-week sampling schedule. If an exceedance of the opacity limit is measured, then the observation frequency shall be reverted to the once-a-day sampling schedule. [45CSR13, R13-0715, A.12] [3S, 8S]

The Fluid Bed Dryer and the Rotary dryer shall be observed visually at least each calendar week during periods of normal facility operation for a sufficient time interval to determine if the unit has any visible emissions using 40C.F.R.Part 60 Appendix A, Method 22. If visible emissions from any of the emissions units are observed during these weekly observations, or at any other time, visible emissions evaluations in accordance with 40C.F.R. 60

Appendix A, Method 9 shall be conducted as soon as practicable, but no later than one (1) month from the time of the observation. However, a Method 9 evaluation shall not be required if the visible emissions condition is corrected in a timely manner; the emissions unit is operating at normal operating conditions; and, the cause and corrective measures taken are recorded. [45CSR13, R13-0715, A.13] [3S, 8S]

Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1.[45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF #6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 &42]

### Testing Requirements

Tests that are required by the Director to determine compliance with the emission limitations set forth in 4.1.4 and 4.1.5 of this permit shall be conducted in accordance with the methods as set forth below. The Director may require a different test method or approve an alternative method in light of any new technology advancements that may occur. Compliance testing shall be conducted at 100% of the peak load unless otherwise specified by the Director.

a. Tests to determine compliance with PM emission limits shall be conducted in accordance with Method 5, 5A, 5B, 5C, 5D, 5E, 5F, 5G, or 5H as set forth in 40 CFR 60, Appendix A. [45CSR13, R13-0715, B.7] [3S, 8S]

With regard to any testing required by the Director, the permittee shall submit to the Director of the division of Air Quality a test protocol detailing the proposed test methods, the date, and the time the proposed testing is to take place, as well as identifying the sampling locations and other relevant information. The test protocol must be received by the Director no less than thirty (30) days prior to the date the testing is to take place. Test results shall be submitted to the Director no more than sixty (60) days after the date the testing takes place. [45CSR13, R13-0715, B.8] [3S, 8S]

Within 180 days of the permit approval, and once per permit term, the permittee shall conduct or have conducted test(s) on the fluid bed and rotary dryers to determine compliance with the Particulate Matter emission limitations as set forth in Sections 4.1.4 & 4.1.5 above. Such Test(s) shall be conducted in accordance with Sections 4.3.1 and 4.3.2 contained herein. The Director, or a duly authorized representative, may witness or conduct such tests. Should the Director exercise this option to conduct such test(s), the operator shall provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices. [45CSR§30-5.1c] [3S, 8S]

**Note: Rotary Dryer tested – 12-18-2012 (not operational since 2014), Fluid Bed Dryer tested – 08-02-2017.**

The owner or operator shall determine compliance with the particulate matter standards in R30-06500001-2014 (MM01 & MM02) Section 5.1.1(a) according to Test method and Procedures in 40 C.F.R. §60.675. [40 C.F.R. §60.675; 45CSR16]

### Recordkeeping Requirements

Records of quantity and type of fuel used, and the fuel sulfur content analysis shall be retained on-site by the permittee for at least five (5) years. [45CSR13, R13-0715, A.4] [3S, 8S]

Compliance with annual limitations of SO<sub>2</sub>, NO<sub>x</sub>, VOC and CO in Section 4.1.5 shall be demonstrated by recordkeeping of monthly fuel use reports and fuel usage limitations conforming to the following equations. Records will be maintained on-site for at least five years and shall be submitted to the Director upon request.

SO<sub>2</sub>:  $142 F_2 S_2 + 150 F_4 S_4 + 157 F_5 S_5 + 157 F_6 S_6 + 147 FR SR = 534,000$  lbs/yr of SO<sub>2</sub> NO<sub>x</sub>

:  $20 F_2 + 20 F_4 + 55 F_5 + 55 F_6 + 19 FR + 100N + 19 P = 192,700$  lbs/yr of NO<sub>x</sub>

CO:  $5 F_2 + 5 F_4 + 5 F_5 + 5 F_6 + 5 FR + 84 N + 3.2 P = 27,507$  lbs/yr of CO

VOC:  $0.2 F_2 + 0.2 F_4 + 0.28 F_5 + 0.28 F_6 + 0.22 FR + 5.5 N + 0.3 P = 2,541$  lbs/yr of VOC

Where:

F<sub>2</sub> = #2 Fuel Oil use, in 1000 gallons, for last twelve month period

F<sub>4</sub> = #4 Fuel Oil use, in 1000 gallons, for last twelve month period

F<sub>5</sub> = #5 Fuel Oil use, in 1000 gallons, for last twelve month period

F<sub>6</sub> = #6 Fuel Oil use, in 1000 gallons, for last twelve month period

FR = Recycled Fuel Oil use, in 1000 gallons, for last twelve month period

P = Propane use, in 1000 gallons, for last twelve month period

N = Natural gas use, in million cubic feet of gas, for last twelve month period

S<sub>2</sub> = Weighted average sulfur content of all #2 Fuel Oil used in last twelve month period (by weight) S<sub>4</sub>

= Weighted average sulfur content of all #4 Fuel Oil used in last twelve month period (by weight) S5 =  
Weighted average sulfur content of all #5 Fuel Oil used in last twelve month period (by weight) S6 =  
Weighted average sulfur content of all #6 Fuel Oil used in last twelve month period (by weight) SR =  
Weighted average sulfur content of all Recycled Oil used in last twelve month period (by weight)  
[45CSR13, R13-0715, A.8] [3S, 8S]

Records of each shipment of recycled oil chemical analyses, quantity and type of fuel used, maximum fuel rating (BTU/gallon), and the fuel sulfur analysis shall be retained on-site by the permittee for at least five (5) years. The owner or operator shall keep record of quality control and quality assurance program for the fuel analysis. If a certified lab is used to provide the fuel analysis, the quality control and assurance program is deemed to be satisfactory. The permittee will confirm the certified lab fuel analysis results by using an independent certified lab at least once in every six months to analyze the fuel. [45CSR13, R13-0715, A.10] [3S, 8S]

The permittee shall monitor and record the pressure drop across each scrubber (during operation) on a daily basis. These records shall be kept on site for a minimum of 5 years and made available to the Director or Authorized Representative upon request. [45CSR13, R13-0715, A.11] [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [3S, 8S]

Qualified personnel shall perform visual inspections of the scrubbers at least monthly and perform routine maintenance to assure proper operation of the scrubbers. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [3S, 8S]

General recordkeeping requirements.

(1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements.  
[40 C.F.R. §64.9(b); 45CSR§30-5.1.c.] [3S, 8S]

5.4.7. For the purpose of determining compliance with the emission limits as set forth in Sections 5.1.6.1 and 5.1.6.2, the permittee shall maintain all records that are required herein. Said records shall be maintained on site for a period of five (5) years and shall be made available to the Director or his/her duly authorized representative upon request.  
**[45CSR13, R13-2015, B.1] [Stack # 25]**

5.4.8. For the purpose of determining compliance with the process weight rate limitations set forth in Section 5.1.6.3 the permittee shall maintain monthly and annual records on the processing rate of sand to the Trash Vibrating Screen. Compliance with the monthly and annual process weight rate limits shall be determined using a rolling yearly total. A rolling yearly total shall mean the sum of the process weight rate at any given time for the previous twelve (12) consecutive months. Said records shall be maintained on site for a period of five (5) years. Certified copies of said records shall be made available to the Director or his/her duly authorized representative upon request. The monthly and annual sand processing records may be maintained using the U.S.Silica Company computerized Production Tracking Data System (PTDS)  
**[45CSR13, R13-2015, B.2] [SCREN16]**

5.4.9. For the purpose of determining compliance with the conditions set forth in Section 5.1.6.4, the permittee shall maintain certified annual records that contain at a minimum the following:  
Hours of Operation when the Trash Vibrating Screen is operating without the required control device (Cartridge Filter). Said records shall be maintained on site for a period of five (5) years. Certified copies of these records shall be made available to the Director or his/her duly authorized representative upon request.  
**[45CSR13, R13-2015, B.3] [CF#25]**

5.4.10. For the purpose of determining compliance with the conditions set forth in Section 5.1.6.5, the permittee shall meet the following requirements for the control device CF#25:  
a. Maintenance records shall be maintained on site for a period of five (5) years. Certified copies of said records shall be made available to the Director or his/her duly authorized representative upon request.  
b. Malfunctions shall be documented in writing and records of these malfunctions maintained at the facility for a period of five (5) years. Certified copies of said records shall be made available to the Director or his/her duly authorized representative upon request. At minimum, the following information shall be documented for each malfunction:

1. The cause of malfunction
2. Steps taken to:
  - correct the malfunction
  - minimize emissions during malfunction
3. The duration of the malfunction in hours.
4. The estimated increase in emissions during the malfunction.
5. Any changes/modifications made to equipment and/or procedures that will help prevent future recurrence of the malfunction.

[45CSR13, R13-2015, B.4] [CF#25]

5.4.11. The permittee shall keep records of monitoring requirements of Section 5.2 as specified in Sections 3.4.1, 3.4.2.  
[45CSR§30-5.1c]

5.4.12. The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis.

[40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.13. Qualified personnel shall perform visual inspections of the fabric filters control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters. The results of inspection and performance of routine maintenance shall be recorded.

[40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.14. *General recordkeeping requirements.* (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

[40 C.F.R. §64.9(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

### **Reporting Requirements**

General reporting requirements.

(1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R.

§70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R.

§64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.] [3S, 8S]

5.5.1. Reserved.

5.5.2. (a) *General reporting requirements.* (1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

(2) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R.

§70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(iii) A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> Slurry Pumps, CYCLO4 & CYCLO5, FERRO2, CYCLO3, Drain Shed, CONV46, CONV47, CLASS5, Conditioner, Floatation, Vacuum Table, CONV48, CONV50, CONV49, DRYER #2 (8S), SCREW21, ELEV19, SCREN18 (1E), SCREW22, ELEV20, PACKR8 (1E)		<b>Emission unit name:</b> Wet Float Plant	
<b>List any control devices associated with this emission unit:</b> WSc #8, CF #9			
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Rotary Dryer (8S), Stack #8, Wet Float Plant, and associated fugitive emissions.			
<b>Manufacturer:</b> In House		<b>Model number:</b> NA	
<b>Serial number:</b>			
<b>Construction date:</b> Pre-1970		<b>Installation date:</b> Pre-1970	
<b>Modification date(s):</b> NA			
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 25 TPH			
<b>Maximum Hourly Throughput:</b> 25		<b>Maximum Annual Throughput:</b> 219,000	
<b>Maximum Operating Schedule:</b> 8760 Hours/Year			
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? Yes</b>		<b>If yes, is it?</b> propane, #2 Fuel Oil, #4 Fuel Oil, #5 Fuel Oil, #6 Fuel Oil, natural gas and Recycled Fuel Oil	
<b>Maximum design heat input and/or maximum horsepower rating:</b> 17.1 MMBtu/hr		<b>Type and Btu/hr rating of burners:</b> 17,000,000 Btu/hr	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Fuel Type	Max. Sulfur Content
Propane	negligible	Propane	negligible



<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	13.750
Nitrogen Oxides (NO <sub>x</sub> )	--	96.350
Lead (Pb)	--	0.000
Particulate Matter (PM <sub>2.5</sub> )	--	78.804
Particulate Matter (PM <sub>10</sub> )	--	98.610
Total Particulate Matter (TSP)	--	98.840
Sulfur Dioxide (SO <sub>2</sub> )		267.000
Volatile Organic Compounds (VOC)		1.270
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
All	--	0.138
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p><b>Notes:</b>  Total emissions are for all units associated with Wet Float Plant.  Annual emission rate based on 8,760 hours of operation per year.</p>		
<b><i>Applicable Requirements</i></b>		

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

### **Applicable Requirements**

The Fluid Bed dryer (3S) and the Rotary dryer (8S) shall burn the following fuels: propane, #2 Fuel Oil, #4 Fuel Oil, #5 Fuel Oil, #6 Fuel Oil, natural gas and Recycled Fuel Oil. [45CSR13, R13-0715, A.2] [3S, 8S]

The following sulfur limits shall not be exceeded: #2 Fuel Oil shall have a maximum of 0.2% S by weight. #4, # 5 and #6 Fuel Oil and Recycled oil shall have a maximum of 1.5 % sulfur by weight. [45CSR13, R13-0715, A.3] [3S, 8S]

Combined emissions from the Fluid Bed Dryer (3S) and Rotary Dryer (8S) shall not exceed the following annual limitations in Tons per year (TPY):

Particulate Matter: 95.48

SO<sub>2</sub>: 267.0

NO<sub>x</sub>: 96.35

VOC: 1.27

CO: 13.75

[45CSR13, R13-0715, A.6] [3S, 8S]

The fuel rating of the recycled oil shall not exceed 150,000 BTU/gallon. [45CSR13, R13-0715, A.7] [3S, 8S]

The following conditions shall be followed by the permittee for the use of Recycled Oil as dryer fuel:

c. The registrant shall not receive, store, burn or fire any recycled oil which is considered a hazardous waste or does not meet the used oil specifications below (40 C.F.R. 279.11, Table 1 & Recycled Oil specification provided by U.S.Silica). The burning of recycled oil that does not meet these specifications shall constitute a violation of 45CSR25, 33CSR20 and the requirements, provisions, standards and conditions of this Permit.

Maximum Allowable Specification Arsenic: <5.0 ppm

Cadmium: <2.0 ppm Chromium:<10.0 ppm Lead: <100.0 ppm

PCBs: <2.0 ppm

Total Halogen: <1000.0 ppm Flash Point: >100.0 Degrees F

d. The registrant shall receive a chemical analysis with each shipment or delivery of recycled oil from the supplier or marketer. The analysis shall identify the name and address of the supplier or marketer, the supplier or marketer's USEPA Identification Number and the following used or recycled oil information:

xi. Date of shipment or delivery

xii. Quantity received

xiii. Arsenic content

xiv. Cadmium content

xv. Chromium content

xvi. Lead content

xvii. PCB content

xviii. Total Halogen content

xix. Flash point

xx. Sulfur content

c. The Director or his or her duly authorized representative may conduct or require the permittee to conduct detailed chemical analyses of any used or recycled oil received, stored or fired in the dryer burner. [45CSR13, R13-0715, A.9] [3S, 8S]

The permitted facility shall comply with all provisions of 45CSR10, provided that the permittee shall comply with any more stringent requirements as may be set forth under Sections 4.1.1 to 4.1.7, 4.2.1, 4.4.1 to 4.4.4 of the permit. The principal provisions of 45CSR10 are as follows:

§45-10-3.3 - Maximum Allowable Emission Rates for Similar Units in All Priority III Regions Except Region IV. No person shall cause, suffer, allow, or permit the discharge of sulfur dioxide into the open air from all stacks located at one plant, measured in terms of pounds per hour, in excess of the amount determined as follows:

(3.3.f) - For Type 'b' and Type 'c' fuel burning units, the product of 3.2 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour.

§45-10-3.4.a. - Unless otherwise approved by the Director, the maximum allowable emission rate for an individual stack shall not exceed by more than twenty-five percent (25%) the emission rate determined by prorating the total allowable emission rate based on the basis of individual unit heat input at design capacity for all fuel burning units discharging through that stack.

§45-10-4.1. - No person shall cause, suffer, allow, or permit, the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations.

§45-10-8.2.a. - At the request of the Director the owner and/or operator of a source shall install such stack gas monitoring devices as the Director deems necessary to determine compliance with the provisions of this rule. The data from such devices shall be readily available at the source location or such other reasonable location that the Director may specify. At the request of the Director, or his or her duly authorized representative, such data shall be made available for inspection or copying. Failure to promptly provide such data shall constitute a violation of this rule. [45CSR13, R13-0715, B.4] [3S, 8S]

At such reasonable times as the Director may designate, the owner or operator of any fuel burning unit(s), manufacturing process source(s) or combustion source(s) may be required to conduct or have conducted tests to determine the compliance of such source(s) with the emission limitations of sections 45CSR§§10-3, 4 or 5. Such tests shall be conducted in accordance with the appropriate test method set forth in 40 CFR Part 60, Appendix A, Method 6, Method 15 or other equivalent EPA testing method approved by the Director. The Director, or his or her duly authorized representative, may at his or her option witness or conduct such tests. Should the Director exercise his or her option to conduct such tests, the operator will provide all necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices. [45CSR§10-8.1a] [3S, 8S]

The Director, or his duly authorized representative, may conduct such other tests as he or she may deem necessary to evaluate air pollution emissions other than those noted in section 45CSR§10-3. [45CSR§10-8.1b] [3S, 8S]

The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) shall demonstrate compliance with sections 45CSR§§10-3, 4 and 5 of this rule by testing and /or monitoring in accordance with one or more of the following: 40 CFR Part 60, Appendix A, Method 6, Method 15, continuous emissions monitoring systems (CEMS) or fuel sampling and analysis as set forth in an approved monitoring plan for each emission unit. [45CSR§10-8.2c] [3S, 8S]

Monitoring plans pursuant to subsection 45CSR§10-8.2.c shall be submitted to the Director within six (6) months of the effective date of this rule. Approval or denial of such plans shall be within twelve (12) months of the effective date of this rule. (Monitoring Plan approved on April 25, 2003. Compliance with terms and conditions of 45CSR13, R13-0715F assures compliance with 45CSR10 and 10A ) [45CSR§10-8.2.c.2] [3S, 8S]

The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) subject to sections 45CSR§§10-3, 4 or 5 shall maintain on-site a record of all required monitoring data as established in a monitoring plan pursuant to subdivision 45CSR§10-8.2.c. Such records shall be made available to the Director or his duly authorized representative upon request. Such records shall be retained on-site for a minimum of five years. [45CSR§10-8.3.a.] [3S, 8S]

The owner or operator shall submit a periodic exception report to the Director, in a manner specified by the Director. Such an exception report shall provide details of all excursions outside the range of measured emissions or monitored parameters established in an approved monitoring plan and shall include, but not be limited to, the time of the excursion, the magnitude of the excursion, the duration of the excursion, the cause of the excursion and the corrective action taken. [45CSR§10-8.3.b.] [3S, 8S]

The following scrubber pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the scrubber to attain the required minimum particulate removal efficiency. Scrubber pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within  $\pm$ 0.1 inch water gauge. An excursion shall be defined as when the scrubber pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the scrubber and corrective actions shall be taken to return the pressure drop within the following range: 3S: 2.0 to 5.8 (in H<sub>2</sub>O) 8S: 0.5 to 2.0 (in H<sub>2</sub>O)

According to the CAM plan submitted, the pressure gauges on the scrubbers shall be operated continuously during operation of the dryers.

[40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [3S, 8S]

5.1.9.1. The maximum hourly and annual processing rates of sand through the bulk sand bagger shall not exceed 30 TPH and 262,800 TPY, based on 8,760 hours of operation per year.

[45CSR13, R13-2299, A.1] [PACKR8]

5.1.9.2. The permittee shall operate the air pollution control device, the Torit Model Number 4DF32-155 Pulse Type Cartridge Dust Collector (Equipment ID No. 1C; Emission Point ID No. 1E - Stack #9), as outlined in Permit Application R13-2299.

[45CSR13, R13-2299, A.2] [Stack # 9]

5.1.9.3. In accordance with the requirements of 40 CFR 60, Subpart OOO, the maximum particulate (PM) emissions from the air pollution control device, the Torit Model Number 4DF32-155 Pulse Type Cartridge Dust Collector (Emission Point ID No. 1E - Stack #9), shall not exceed 0.022 grains per dry standard cubic foot (0.05 grams/dry standard meter).

[45CSR13, R13-2299, A.3; 40 C.F.R. § 60.672; 45CSR16] [Stack # 9]

Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

#### **Monitoring Requirements**

Compliance with Section 3 of 45CSR7 shall be determined by conducting daily visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for the scrubber. These observations shall be conducted during periods of normal facility operation for a sufficient time interval to determine if the unit has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22. If sources of visible emissions are identified during the survey, the permittee shall conduct an opacity evaluation as outlined in 45CSR7A-2.1.a,b, within 24 hours. A 45CSR7A-2.1.a,b evaluation shall not be required if the visible emission condition is corrected in a timely manner and the units are operated at normal operating conditions with no visible emissions being observed.

Records shall be maintained on site reporting the results of each test. Said opacity evaluations of sources identified during the Method 22 survey shall only be conducted by an employee or contractor certified in 40CFR60 Appendix A, Method 9, Visible Emission observations. Upon observing any visible emissions in excess of twenty percent (20%) opacity, or excess of forty (40%) for any period or periods aggregating more than five (5) minutes in any sixty (60) minute period, the Company shall submit a written report, certified by a responsible official, to the Director of the Division of Air Quality within five (5) days after taking said reading. When in compliance on a daily basis for four (4) consecutive weeks, then the observation frequency shall be decreased to a once-a-week sampling schedule. If an exceedance of the opacity limit is measured, then the observation frequency shall be reverted to the once-a-day sampling schedule. [45CSR13, R13-0715, A.12] [3S, 8S]

The Fluid Bed Dryer and the Rotary dryer shall be observed visually at least each calendar week during periods of normal facility operation for a sufficient time interval to determine if the unit has any visible emissions using 40C.F.R.Part 60 Appendix A, Method 22. If visible emissions from any of the emissions units are observed during these weekly observations, or at any other time, visible emissions evaluations in accordance with 40C.F.R. 60 Appendix A, Method 9 shall be conducted as soon as practicable, but no later than one (1) month from the time of the observation. However, a Method 9 evaluation shall not be required if the visible emissions condition is corrected in a timely manner; the emissions unit is operating at normal operating conditions; and, the cause and corrective measures taken are recorded. [45CSR13, R13-0715, A.13] [3S, 8S]

Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1. [45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 9, 25, 28, 29, 33, 34, 36, 37, 38 & 41]

Qualified personnel shall perform visual inspections of the fabric filters control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 9, 25, 28, 29, 33, 34, 36, 37, 38 & 41]

### Testing Requirements

Tests that are required by the Director to determine compliance with the emission limitations set forth in 4.1.4 and 4.1.5 of this permit shall be conducted in accordance with the methods as set forth below. The Director may require a different test method or approve an alternative method in light of any new technology advancements that may occur. Compliance testing shall be conducted at 100% of the peak load unless otherwise specified by the Director.

a. Tests to determine compliance with PM emission limits shall be conducted in accordance with Method 5, 5A, 5B, 5C, 5D, 5E, 5F, 5G, or 5H as set forth in 40 CFR 60, Appendix A. [45CSR13, R13-0715, B.7] [3S, 8S]

With regard to any testing required by the Director, the permittee shall submit to the Director of the division of Air Quality a test protocol detailing the proposed test methods, the date, and the time the proposed testing is to take place, as well as identifying the sampling locations and other relevant information. The test protocol must be received by the Director no less than thirty (30) days prior to the date the testing is to take place. Test results shall be submitted to the Director no more than sixty (60) days after the date the testing takes place. [45CSR13, R13-0715, B.8] [3S, 8S]

Within 180 days of the permit approval, and once per permit term, the permittee shall conduct or have conducted test(s) on the fluid bed and rotary dryers to determine compliance with the Particulate Matter emission limitations as set forth in Sections 4.1.4 & 4.1.5 above. Such Test(s) shall be conducted in accordance with Sections 4.3.1 and 4.3.2 contained herein. The Director, or a duly authorized representative, may witness or conduct such tests. Should the Director exercise this option to conduct such test(s), the operator shall provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices. [45CSR§30-5.1.c] [3S, 8S]

**Note: Rotary Dryer tested – 12-18-2012 (not operational since 2014), Fluid Bed Dryer tested – 08-02-2017.**

The owner or operator shall determine compliance with the particulate matter standards in R30-06500001-2014 (SM01) Section 5.1.1(a) according to Test method and Procedures in 40 C.F.R. §60.675. [40 C.F.R. §60.675; 45CSR16]

### Recordkeeping Requirements

Records of quantity and type of fuel used, and the fuel sulfur content analysis shall be retained on-site by the permittee for at least five (5) years. [45CSR13, R13-0715, A.4] [3S, 8S]

Compliance with annual limitations of SO<sub>2</sub>, NO<sub>x</sub>, VOC and CO in Section 4.1.5 shall be demonstrated by recordkeeping of monthly fuel use reports and fuel usage limitations conforming to the following equations. Records will be maintained on-site for at least five years and shall be submitted to the Director upon request.

SO<sub>2</sub>:  $142 F_2 S_2 + 150 F_4 S_4 + 157 F_5 S_5 + 157 F_6 S_6 + 147 FR SR = 534,000 \text{ lbs/yr of SO}_2$

NO<sub>x</sub>:  $20 F_2 + 20 F_4 + 55 F_5 + 55 F_6 + 19 FR + 100N + 19 P = 192,700 \text{ lbs/yr of NO}_x$

CO:  $5 F_2 + 5 F_4 + 5 F_5 + 5 F_6 + 5 FR + 84 N + 3.2 P = 27,507 \text{ lbs/yr of CO}$

VOC:  $0.2 F_2 + 0.2 F_4 + 0.28 F_5 + 0.28 F_6 + 0.22 FR + 5.5 N + 0.3 P = 2,541 \text{ lbs/yr of VOC}$

Where:

F<sub>2</sub> = #2 Fuel Oil use, in 1000 gallons, for last twelve month period

F<sub>4</sub> = #4 Fuel Oil use, in 1000 gallons, for last twelve month period

F<sub>5</sub> = #5 Fuel Oil use, in 1000 gallons, for last twelve month period

F<sub>6</sub> = #6 Fuel Oil use, in 1000 gallons, for last twelve month period

FR = Recycled Fuel Oil use, in 1000 gallons, for last twelve month period

P = Propane use, in 1000 gallons, for last twelve month period

N = Natural gas use, in million cubic feet of gas, for last twelve month period

S<sub>2</sub> = Weighted average sulfur content of all #2 Fuel Oil used in last twelve month period (by weight)

S<sub>4</sub> = Weighted average sulfur content of all #4 Fuel Oil used in last twelve month period (by weight)

S<sub>5</sub> = Weighted average sulfur content of all #5 Fuel Oil used in last twelve month period (by weight)

S<sub>6</sub> = Weighted average sulfur content of all #6 Fuel Oil used in last twelve month period (by weight)

Weighted average sulfur content of all #6 Fuel Oil used in last twelve month period (by weight) SR =  
Weighted average sulfur content of all Recycled Oil used in last twelve month period (by weight)  
[45CSR13, R13-0715, A.8] [3S, 8S]

Records of each shipment of recycled oil chemical analyses, quantity and type of fuel used, maximum fuel rating (BTU/gallon), and the fuel sulfur analysis shall be retained on-site by the permittee for at least five (5) years. The owner or operator shall keep record of quality control and quality assurance program for the fuel analysis. If a certified lab is used to provide the fuel analysis, the quality control and assurance program is deemed to be satisfactory. The permittee will confirm the certified lab fuel analysis results by using an independent certified lab at least once in every six months to analyze the fuel. [45CSR13, R13-0715, A.10] [3S, 8S]

The permittee shall monitor and record the pressure drop across each scrubber (during operation) on a daily basis. These records shall be kept on site for a minimum of 5 years and made available to the Director or Authorized Representative upon request. [45CSR13, R13-0715, A.11] [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [3S, 8S]

Qualified personnel shall perform visual inspections of the scrubbers at least monthly and perform routine maintenance to assure proper operation of the scrubbers. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [3S, 8S]

General recordkeeping requirements.

(1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements. [40 C.F.R. §64.9(b); 45CSR§30-5.1.c.] [3S, 8S]

For the #9 Torit Model No. 4DF32-155 Pulse Type Cartridge Dust Collector (Equipment ID No. 1C-CF#9):

a. Maintenance records shall be maintained on site for a period of five (5) years. Certified copies of these records shall be made available to the Director or his duly authorized representative upon request.

b. Malfunctions shall be documented in writing and records of these malfunctions maintained at the facility for a period of 5 years. Certified copies of these records shall be made available to the Director or his duly authorized representative upon request. At minimum, the following information shall be documented for each malfunction:

- The cause of malfunction.
- Steps taken to:
  - correct the malfunction.
  - minimize emissions during malfunction.
- The duration of the malfunction in hours.
- The estimated increase in emissions during the malfunction.
- Any changes/modifications made to equipment and/or procedures that will help prevent future recurrence of the malfunction.

[45CSR13, R13-2423, B.5] [CF#9]

5.4.11. The permittee shall keep records of monitoring requirements of Section 5.2 as specified in Sections 3.4.1, 3.4.2. [45CSR§30-5.1c]

5.4.12. The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.13. Qualified personnel shall perform visual inspections of the fabric filters control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.14. *General recordkeeping requirements.* (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

[40 C.F.R. §64.9(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

### **Reporting Requirements**

General reporting requirements.

(3) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R.

§64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.] [3S, 8S]

5.5.2. (a) *General reporting requirements.* (1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

(2) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(iii) A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8.

Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> MOB-CONV, BE-03, C Silo, SCREN17 (1E), BE01 (E2), BE02 (E2), LS01 (FE3), CONV26, CONV27, ELEV4, VIBFD5, CONV39-41, SCREN7-9 & SCREN14-15 (1E), CONV 30, CONV29, ELEV2, ELEV1, ELEV3, SCREN10-13 & SCREN2-4, CONV31, CONV32, CONV36, CONV37, CONV33, CONV34, CONV51, PACKR1		<b>Emission unit name:</b> Screening and Unground Sand Processing	
		<b>List any control devices associated with this emission unit:</b> CF #6, CF #7, CF #25, CF #27, CF#36, CF#40	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Screening and Unground Sand Processing and associated fugitive emissions.			
<b>Manufacturer:</b> N/A		<b>Model number:</b> N/A	
		<b>Serial number:</b> NA	
<b>Construction date:</b> Pre-1975		<b>Installation date:</b> Pre-1975	
		<b>Modification date(s):</b> 2012	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 200 TPH			
<b>Maximum Hourly Throughput:</b> 200		<b>Maximum Annual Throughput:</b> 1,752,000 TPY	
		<b>Maximum Operating Schedule:</b> 8760 Hours/Year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel?</b> No			<b>If yes, is it?</b>
<b>Maximum design heat input and/or maximum horsepower rating:</b>			<b>Type and Btu/hr rating of burners:</b>
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
<b>Fuel Type</b>	<b>Max. Sulfur Content</b>	<b>Max. Ash Content</b>	<b>BTU Value</b>



<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--
Particulate Matter (PM <sub>2.5</sub> )	--	13.436
Particulate Matter (PM <sub>10</sub> )	--	18.472
Total Particulate Matter (TSP)	--	22.048
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	--
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
Other Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p><b>Notes:</b>  PM emissions from Stack #6 shall not exhibit PM greater than 0.014 grains per dry standard cubic foot of exhaust. [40 C.F.R. §60.672(a) &amp; Table 2 of Subpart OOO; 45CSR16; 45CSR§7-4.1.] Compliance with the concentration limit in R30-06500001-2014 (MM01 &amp; MM02) in 5.1.7.1.c. ensures compliance with 45CSR§7-4.1.  Allowable PM Stack Emissions (Type 'a' Source Operation)  [45CSR§7-4.1] [Stacks 1, 7, 10, 11, 12, 13, 20, 27, 39, 40, Wsc#2  PM emissions from Stack #25 are based on PM not greater than 0.022 grains per dry standard cubic foot of exhaust. [40 C.F.R. §60.672(a) &amp; Table 2 of Subpart OOO; 45CSR16; 45CSR§7-4.1.] Compliance with the concentration limit in R30-06500001-2014 (MM01 &amp; MM02) 5.1.6.2.c. ensures compliance with 45CSR§7-4.1.  PM emissions from Stack #36 are based on PM not greater than 0.14 grains per dry standard cubic foot of exhaust. [40 C.F.R. §60.672(a) &amp; Table 2 of Subpart OOO; 45CSR16; 45CSR§7-4.1.]  Total emissions are for all units associated with Screening and Unground Sand Processing.</p>		
<b><i>Applicable Requirements</i></b>		

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

**Applicable Requirements**

Visible emissions from Stack #6 shall not be greater than 7% opacity on a six minute average.

**[40 C.F.R. §60.672(a) & Table 2 of Subpart OOO; 45CSR16; 45CSR§7-3.1.]** *Compliance with the opacity limit in 5.1.7.1.b. ensures compliance with 45CSR§7-3.1.*

c. PM emissions from Stack #6 shall not exhibit PM greater than 0.014 grains per dry standard cubic foot of exhaust.

**[40 C.F.R. §60.672(a) & Table 2 of Subpart OOO; 45CSR16; 45CSR§7-4.1.]** *Compliance with the concentration limit in 5.1.7.1.c. ensures compliance with 45CSR§7-4.1.*

6.1.2. The following Non-NSPS Fabric Filter pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the filters to attain the required minimum particulate removal efficiency. Filter pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within ±0.1 inch water gauge. An excursion shall be defined as when the filter pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the filter and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0”

According to the CAM plan submitted, the differential pressure gauges for the filters shall be operated continuously during operation of the emission units. [40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stacks #1, 7, 10, 11, 12, 13, 20, 27, 39, 40]

5.1.6.2. In accordance with the requirements of 40CFR60, Subpart OOO, the maximum particulate (PM) emissions from air pollution control device CF#25 shall not exceed 0.022 grains per dry standard cubic foot (0.05 grams per dry standard meter). [45CSR13, R13-2015, A.2] [Stack # 25]

5.1.6.3. The maximum hourly and annual rate of sand to the Trash Vibrating Conveyor (SCREEN), Equipment ID No. TS1(SCREEN 16), shall not exceed 220.0 tons/hour and 1,927,200 tons/year. [45CSR13, R13-2015, A.3] [SCREEN16]

5.1.6.4. The Trash Vibrating Conveyor (SCREEN), Equipment ID No. TS1, shall be controlled at all times of operation with a cartridge filter, Control Equipment ID No. CF#25. [45CSR13, R13-2015, A.4] [CF#25]

5.1.6.5. The permittee shall operate the cartridge filter, Control Equipment ID No.CF#25, as outlined in Permit Application R13-2015. [45CSR13, R13-2015, A.5] [CF#25]

5.1.7.2 The following conditions and requirements are specific to the five Rotex Screens:

a. The combined annual processing rate of the five Rotex Screens shall not exceed 3,285,000 tons of sand per year.

b. Fugitive visible emissions from Building #7 (location of the five Rotex Screens) shall not be greater than 10% opacity on a six minute average.

**[45CSR16; 40 C.F.R. §60.672(b) & Table 3 of Subpart OOO; 45CSR§7-3.1.]** *Compliance with the opacity limit in 5.1.7.2.b. ensures compliance with 45CSR§7-3.1.*

c. PM emissions from Stack #36 shall not exhibit PM greater than 0.022 grains per dry standard cubic foot of exhaust.

**[40 C.F.R. §60.672(a) & Table 2 of Subpart OOO; 45CSR16]**

d. Visible emissions from Stack #36 shall not be greater than 7% opacity on a six minute average.

**[40 C.F.R. §60.672(a) & Table 2 of Subpart OOO; 45CSR16]** *Compliance with the opacity limit in 5.1.7.2.d. ensures compliance with 45CSR§7-3.1.*

**[45CSR13, R13-2145, 4.1.2.] (Rotex Screens – 1S-5S)**

**5.1.7.3 Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 of R13-2145C (*i.e.*, CF #36 and CF #6) and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR13, R13-2145, 4.1.3.; 45CSR§13-5.11.]

7.1.1. The following conditions and requirements are specific to the Mobile Conveyor (MOB-CONV), Bucket Elevator (BE-03), and the Cristobalite Silo (C Silo):

The permittee shall meet the following fugitive emissions limit for Bucket Elevator (BE-03) and the transfer points on Mobile Conveyor (MOB-CONV), Cristobalite Silo (C Silo), enclosed truck or railcar loading stations or from any other affected facility (as defined in §§60.670 and 60.671): 7 percent opacity

[45CSR16, 40CFR §60.672(b) and Table 3 to Subpart OOO of 40CFR60; 45CSR13, R13-2145, 5.1.1.]

Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

**Monitoring Requirements**

Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1.[45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF #6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 &42]

5.1.11. The following cartridge filter or baghouse pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the cartridge filter or baghouse to attain the required minimum particulate removal efficiency. Cartridge filter or baghouse pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within ±0.1 inch water gauge. An excursion shall be defined as when the Cartridge filter or baghouse pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the cartridge filter or baghouse and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0”

According to the CAM plan submitted, the differential pressure gauges for the cartridge filter or baghouse shall be operated continuously during operation of the emission units.

[40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stack # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.2.1. Visible Emissions evaluations will be conducted as specified in Facility-wide requirements 3.2.1.

[45CSR§30-5.1c]

5.2.5. Once a quarter (every three months), the permittee shall conduct 30 minute visible emission inspections using U.S. EPA Method 22 (Appendix A-7 of Part 60) of Stack #6. The Method 22 observations shall be conducted while the dust collector 1C (dust collector for Stack #6) is operating. Such monitoring is deemed satisfactory if no visible emissions are detected during the Method 22 observations. If any visible emissions are detected, then the permittee must initiate corrective actions within twenty–four hours of the observation to bring the dust collector to normal operation. The date and time of every Method 22 observation inspection shall be recorded in accordance with Condition 3.4.2. and in the logbook in accordance with 40 C.F.R. §60.676(b). These records shall include any corrective actions taken. The permittee may elect to establish a different satisfactory (success) level for the visible emissions observations inspections by conducting PM performance test according to 40 C.F.R. §60.675(b) simultaneously with a Method 22 observation to determine what constitutes normal visible emission from Stack #6 when it is in compliance with the PM limit of Condition 5.1.7.1.c. These revised visible emissions satisfactory (success) level must be incorporated into the Facility’s Title V Operating Permit.

[45CSR13, R13-2145, 4.2.1.; 40 C.F.R. §60.674(c); 45CSR16]

7.2.1. The permittee shall maintain monthly and annual records on the processing rate of sand to the mobile conveyor and bucket elevator. The monthly and annual sand processing records may be maintained using the U.S. Silica Company computerized Production Tracking Data System (PTDS). Such records shall be maintained in accordance with Condition 3.4.2 of this permit.

[45CSR13, R13-2145, 5.2.1.]

7.2.2. The permittee shall maintain records on the specific location of the Mobile Conveyor (MOB-CONV). Upon initial startup, these records shall include the date moved and a plot plan marking the location for each move. Such records shall be maintained in accordance with Condition 3.4.2 of this permit.

## **Testing Requirements**

5.3.1. The owner or operator shall determine compliance with the particulate matter standards in Section 5.1.1(a) according to Test method and Procedures in 40 C.F.R. §60.675.

**[40 C.F.R. §60.675; 45CSR16]**

5.3.2. For demonstrating initial compliance with the visible emission standards of 5.1.7.1.b. and 5.1.7.1.d., the permittee shall conduct performance testing to determine the visible emissions from the point and fugitive emission sources associated with Q-Rok loading at the facility, which includes Stack #6, Bucket Elevators (BE01 & BE02) and the associated load out spout. Such testing shall be conducted in accordance with Method 9 of Appendix A-4 of 40CFR 60, and the procedures in 40 C.F.R. §60.11. and Condition 3.3.1 of this permit and the following additions:

- a. The minimum distance between the observer and the emission source shall be 15 feet. The observer shall, when possible, select a position that minimizes interference from other fugitive sources (e.g. road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of 40 CFR 60, Section 2.1.) must be followed.
- b. The duration of the Method 9 observations for demonstrating compliance with the fugitive emission limit must be 30 minutes (five 6-minute averages). Compliance with the limit in 5.1.7.1.d. shall be based on the average of five 6-minute averages.
- c. If a building/structure encloses the Bucket Elevators BE01 and BE02 and/or load out spout with the DSH system, the permittee shall conduct initial Method 9 observation of the building/structure to determine the compliance with fugitive emission limit of Condition 5.1.7.1.d. according to 40 C.F.R. 60 Subpart OOO and 40 C.F.R. §60.11. Such source must be operating while conducting the observations.

**[40 C.F.R. §§60.675(c) and (d); 45CSR16; 45CSR13, R13-2145, 4.3.1.]**

The permittee may use the following as alternatives to the reference methods and procedures listed in the above:

- a. If visible emissions from two or more facilities (affected sources) continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:
  - i. Use for the combined emission stream the highest fugitive opacity standard application to any of the individual affected contributing to the emission stream.
  - ii. Separate the emissions so that the opacity of emissions from each affected can be read.
- b. A single visible emission observer may conduct visible emissions observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:
  - i. No more than three emission points may be read concurrently.
  - ii. All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.
  - iii. If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

c. The permittee may reduce the 30-day advance notification of performance test in 40 C.F.R. §§60.7(a)(6), 60.8(d) and 15-day notification of Condition 3.3.1.c. to a 7-day advance notification.

**[40 C.F.R. §§60.675(e) and (g); 45CSR16; 45CSR13, R13-2145, 4.3.1.]**

5.3.3. For demonstrating initial compliance with the PM emission limit of 5.1.7.1.c., the permittee shall conduct performance testing to determine the PM concentration rate from Stack #6. Such testing shall be conducted using Method 5 (Appendix A-3 of Part 60), Method 17 ((Appendix A-6) of Part 60), or Method 5I (Appendix A-3 of Part 60). If the exhaust velocity of Stack #6 is too low to measure accurately using the type S pilot tube as specified in EPA Method 2 (Appendix A-1 of Part 60), then the permittee may use the procedure outline in 40 C.F.R. §60.675(e)(4).

**[45CSR13, R13-2145, 4.3.2.]**

5.3.4. The initial performance testing as required in this section (condition 5.3.2. through 5.3.4.) shall be conducted within 60 days after achieving the maximum production rate of 150 tons per hour through the load out with the DSH system, but no later than 180 days after initial start-up of the load out with the DSH system.

**[40 C.F.R. §§60.672(a) and (b); 45CSR16; 45CSR13, R13-2145, 4.3.3.]**

5.3.5. The permittee shall repeat the performance testing as prescribed in Condition 5.3.2. for compliance with the fugitive emission standard of Condition 5.1.7.1.d. within 5 years from the previous performance test demonstrating compliance.

[40 C.F.R. §60.672(b) and Table 3 of 40 C.F.R. 60 Subpart OOO; 45CSR16; 45CSR13, R13-2145, 4.3.4.]

7.3.1. For demonstrating initial compliance with the visible emission limit of 7.1.1, the permittee shall demonstrate compliance by conducting:

a. An initial performance test according to 40 CFR §60.11 and 40 CFR §60.675; and

b. A repeat performance test according to 40 CFR §60.11 and 40 CFR §60.675 within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays.

[45CSR16, Table 3 to Subpart OOO of 40 CFR 60; 45CSR13, R13-2145, 5.3.1.]

7.3.2. Method 9 of Appendix A-4 of 40 CFR 60 and the procedures in 40 CFR §60.11 will be used to determine opacity, with the following additions:

a. The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet);

b. The observer shall, when possible, select a position that minimizes interference from other fugitive emissions sources (e.g., road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of 40 CFR 60, Section 2.1) must be followed.

[45CSR16, 40 CFR §§60.675(b)(2) and (c)(1); 45CSR13, R13-2145, 5.3.2.]

7.3.3. When determining compliance with the fugitive emissions standard for any affected facility described under 40 CFR §§60.672(b) or 60.672(e)(1), the duration of the Method 9 (40 CFR 60, Appendix A-4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in 7.1.1. must be based on the average of the five 6-minute averages.

[45CSR16, 40 CFR §60.675(c)(3); 45CSR13, R13-2145, 5.3.3.]

The owner or operator shall determine compliance with the particulate matter standards in R30-06500001-2014 (MM01 & MM02) Section 5.1.1(a) according to Test method and Procedures in 40 C.F.R. §60.675. [40 C.F.R. §60.675; 45CSR16]

### **Recordkeeping Requirements**

5.4.5. The permittee shall maintain monthly and annual records on the processing rate of sand to the five (5) Rotex Screens. The monthly and annual sand processing records may be maintained using the U.S. Silica Company computerized Production Tracking Data System (PTDS). Such records shall be maintained in accordance with Condition 3.4.2. of this permit.

[45CSR13, R13-2145, 4.2.2.] (Rotex Screens 1S – 5S)

5.4.6 **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0 of the current version of R13-2145, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

[45CSR13, R13-2145, 4.4.2.] (CF #36, CF #6)

5.4.7. For the purpose of determining compliance with the emission limits as set forth in Sections 5.1.6.1 and 5.1.6.2, the permittee shall maintain all records that are required herein. Said records shall be maintained on site for a period of five (5) years and shall be made available to the Director or his/her duly authorized representative upon request.

[45CSR13, R13-2015, B.1] [Stack # 25]

5.4.8. For the purpose of determining compliance with the process weight rate limitations set forth in Section 5.1.6.3 the permittee shall maintain monthly and annual records on the processing rate of sand to the Trash Vibrating Screen. Compliance with the monthly and annual process weight rate limits shall be determined using a rolling yearly total. A rolling yearly total shall mean the sum of the process weight rate at any given time for the previous twelve (12) consecutive months. Said records shall be maintained on site for a period of five (5) years. Certified copies of said records shall be made available to the Director or his/her duly authorized representative upon request. The monthly and annual sand processing records may be maintained using the U.S.Silica Company computerized Production Tracking Data System (PTDS)

[45CSR13, R13-2015, B.2] [SCREN16]

5.4.9. For the purpose of determining compliance with the conditions set forth in Section 5.1.6.4, the permittee shall maintain certified annual records that contain at a minimum the following:

Hours of Operation when the Trash Vibrating Screen is operating without the required control device (Cartridge Filter).

Said records shall be maintained on site for a period of five (5) years. Certified copies of these records shall be made available to the Director or his/her duly authorized representative upon request.

**[45CSR13, R13-2015, B.3] [CF#25]**

5.4.10. For the purpose of determining compliance with the conditions set forth in Section 5.1.6.5, the permittee shall meet the following requirements for the control device CF#25:

- a. Maintenance records shall be maintained on site for a period of five (5) years. Certified copies of said records shall be made available to the Director or his/her duly authorized representative upon request.
- b. Malfunctions shall be documented in writing and records of these malfunctions maintained at the facility for a period of five (5) years. Certified copies of said records shall be made available to the Director or his/her duly authorized representative upon request. At minimum, the following information shall be documented for each malfunction:
  1. The cause of malfunction
  2. Steps taken to:
    - correct the malfunction
    - minimize emissions during malfunction
  3. The duration of the malfunction in hours.
  4. The estimated increase in emissions during the malfunction.
  5. Any changes/modifications made to equipment and/or procedures that will help prevent future recurrence of the malfunction.

**[45CSR13, R13-2015, B.4] [CF#25]**

5.4.11. The permittee shall keep records of monitoring requirements of Section 5.2 as specified in Sections 3.4.1, 3.4.2.

**[45CSR§30-5.1c]**

5.4.12. The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis.

**[40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]**

5.4.13. Qualified personnel shall perform visual inspections of the fabric filters control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters. The results of inspection and performance of routine maintenance shall be recorded.

**[40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]**

5.4.14. *General recordkeeping requirements.* (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

**[40 C.F.R. §64.9(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]**

5.4.15. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0 of the current version of R13-2145, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur.

For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

**[40 C.F.R. §60.676(b)(1); 45CSR16; 45CSR13, R13-2145, 4.4.3.] (CF #36, CF #6)**

7.4.1. The permittee shall maintain a record of each periodic inspection required under 40 CFR §60.674(b), including dates and any corrective actions taken, in a logbook (in written or electronic format). Keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Director upon request.

**[45CSR16, 40 CFR §60.676(b)(1), 45CSR13, R13-2145, 5.4.1.]**

7.4.2. The permittee shall maintain a record of each visible emissions observation, including any data required by 40 C.F.R. 60 Appendix A, Method 22 or 45CSR7A, whichever is appropriate. The record will include, at a minimum, the date, time, name of the emission unit, the applicable visible emissions requirement, the results of the observation, and the name of the observer. Records will be maintained on site for a period of no less than five (5) years stating any maintenance or corrective actions taken as a result of the weekly inspections, and the times the fugitive dust control system(s) are inoperable and any corrective actions taken.

**[45CSR7A, 45CSR13, R13-2145, 5.4.2.]**

7.4.3. Record of Monitoring. The permittee shall keep records of monitoring information that include the following:

- a. The date, place as defined in this permit, and time of sampling or measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of the analyses; and
- f. The operating conditions existing at the time of sampling or measurement.

**[45CSR13, R13-2145, 5.4.3.]**

Recordkeeping will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.4.1., 3.4.2., 3.4.3 and 3.4.4. [45CSR§30-5.1c]

The monitoring required in R30-06500001-2014 (MM01 & MM02) sections 6.2.2 will be recorded. [45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter and the wet scrubber during operation on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

Qualified personnel shall perform visual inspections of the fabric filters and wet scrubber control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters and wet scrubber. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

General recordkeeping requirements. (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements. [40 C.F.R. §64.9(b); 45CSR§30-5.1.c.]

**Reporting Requirements**

5.5.1. Reserved.

5.5.2. (a) *General reporting requirements.* (1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

(2) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

- (i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
- (ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(iii) A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.5.3. The Director shall be notified of the initial start-up of Bucket Elevators BE01 & BE02 and the load out spout with the DSH system within 15 days after such date. The notification of these sources can be included in a single notification and needs to include a description of each affected source, equipment manufacturer, and serial number of the equipment if available. This notification supersedes the notification requirements of Condition 2.18. of the current version of R13-2145.

[45CSR13, R13-2145, 4.5.1.; 40 C.F.R. §§60.676(i)(1) and (k); 45CSR16]

5.5.4. The permittee shall report the results of any test conducted as required in conditions 5.3.2., 5.3.3., 5.3.4., and 5.3.5. of this permit to the Director within 60 days after completing such testing.

[45CSR13, R13-2145, 4.5.2.; 40 C.F.R. §§60.676(f) and (k); 45CSR16]

7.5.1. The Director shall be notified of the initial start-up of Mobile conveyor (MOB-CONV) and Bucket Elevator (BE-03) within 15 days after such date. The notification of these sources can be included in a single notification and needs to include a description of each affected source, equipment manufacturer, and serial number of the equipment if available.

[45CSR16, 40 CFR §60.676(i), 45CSR13, R13-2145, 5.5.1.]

7.5.2. The permittee shall report the results of any test conducted as required in Section 7.3. of this permit to the Director within 60 days after completing such testing.

[45CSR16, 40 CFR §60.676(f), 45CSR13, R13-2145, 5.5.2.]

Reporting will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.5.6 and 3.5.8. [45CSR§30-5.1c]

General reporting requirements.

(3) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(iv) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(v) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.



<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> Pulverizer Tank #19, SCREW3, SCREW5, SCREW4, #1 Mill Feed Bin, #2 Mill Feed Bin, #3 Mill Feed Bin, #4 Mill Feed Bin, FEEDB1, FEEDB2, FEEDB3, FEEDB4, MILL2, MILL3, MILL4, MILL5, SCREW6, AIRSD7, SCREW7, AIRSD8, ELEV6, ELEV7, ELEV8, ELEV9, AIRSE1, AIRSE2, AIRSE3, AIRSE4, AIRSD9, SCREW16, SCREW17, ELEV14, Pulverizer Tank #20, #5 Mill Feed Bin, FEEDB5, MILL6, AIRSD2, ELEV10, AIRSE5, SCREW18, #6 Mill Feed Bin, FEEDB6, MILL7, AIRSD3, ELEV11, AIRSE6, SCREW19, BF1, ELEV 22, ELEV24, Screen21, AIRSD1, Airslide 100, AIRSD1-GENERIC, ELEV15, BIN2		<b>Emission unit name:</b> Milling Process	
		<b>List any control devices associated with this emission unit:</b> 1C, 2C, CF #15, CF #46, CF #47, CF #45, CF #27, CF #10, CF #11, CF #39, CF #12, CF #41	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Milling Process and associated fugitive emissions.			
<b>Manufacturer:</b> NA		<b>Model number:</b> NA	
<b>Construction date:</b> 1981		<b>Installation date:</b> 1981	
		<b>Serial number:</b> NA	
		<b>Modification date(s):</b> NA	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 100			
<b>Maximum Hourly Throughput:</b> 100		<b>Maximum Annual Throughput:</b> 876,000 TPY	
		<b>Maximum Operating Schedule:</b> 8760 Hours/Year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? No</b>		<b>If yes, is it?</b>	
<b>Maximum design heat input and/or maximum horsepower rating:</b>		<b>Type and Btu/hr rating of burners:</b>	
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
<b>Fuel Type</b>	<b>Max. Sulfur Content</b>	<b>Max. Ash Content</b>	<b>BTU Value</b>


<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--
Particulate Matter (PM <sub>2.5</sub> )	--	0.614
Particulate Matter (PM <sub>10</sub> )	--	4.057
Total Particulate Matter (TSP)	--	10.735
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	--
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
Other Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p><b>Notes:</b>  Allowable PM Stack Emissions (Type 'a' Source Operation)  [45CSR§7-4.1] [Stacks 1, 7, 10, 11, 12, 13, 20, 27, 39, 40, Wsc#2  Total emissions are for all units associated with Milling Process.</p>		
<b><i>Applicable Requirements</i></b>		

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

### **Applicable Requirements**

6.1.2. The following Non-NSPS Fabric Filter pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the filters to attain the required minimum particulate removal efficiency. Filter pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within 0.1 inch water gauge. An excursion shall be defined as when the filter pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the filter and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0”

According to the CAM plan submitted, the differential pressure gauges for the filters shall be operated continuously during operation of the emission units. [40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stacks #1, 7, 10, 11, 12, 13, 20, 27, 39, 40]

The maximum quantity of material to be processed by the Microsizer #3 and Handling Equipment shall be limited to the following:

Airslide 100 (Stack #41): 8 TPH

[45CSR13, R13-2595 (Condition A.1) and PD10-027] [Stack # 42 & 41]

Maximum particulate matter emissions to the atmosphere shall not exceed the following:

Airslide 100: 0.15 PPH and 0.66 TPY

[45CSR13, R13-2595 (Condition A.2) and PD10-027] [Stack # 42 & 41]

The following fugitive dust control measures as specified in Permit Application R13-2595 shall be installed, maintained, and operated at all times when the facility is in operation in order to minimize fugitive particulate matter emissions:

Airslide 100,: Torit DFT2-4-155 Baghouse (2C) at 99.9%

[45CSR13, R13-2595 (Condition A.3) and PD10-027] [Baghouses 2C & CF#42; Stack # 42 & 41]

5.1.10.4. The stabilized static pressure loss across baghouse 2C and CF#42 shall remain between 0.5 to 6.0 inches of water. [45CSR13, R13-2595 (Condition A.4) and PD10-027] [Baghouse 2C & CF#42; Stack # 42 & 41]

5.1.10.5. Except during startup and shutdown, opacity from baghouse 2C and Stack #42 shall not exceed 10 percent based on a six minute block average. In order to determine compliance with this limit the permittee shall conduct monthly visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for stacks #41 and #42. These observations shall be conducted during periods of facility operation for a sufficient time interval to determine if the unit has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22. If sources of visible emissions are identified during the survey, the permittee shall conduct an opacity evaluation in accordance with 40CFR60 Appendix A, Method 9, within 24 hours. A 40CFR60 Appendix A, Method 9 evaluation shall not be required if the visible emission condition is corrected within 24 hours and the units are operated at normal operating conditions with no visible emissions being observed. Records shall be maintained on site reporting the results of each test. Upon observing any visible emissions in excess of twenty percent (20%) opacity, or excess of forty (40%) for any period or periods aggregating more than five (5) minutes in any sixty (60) minute period, the Company shall submit a written report, certified by a responsible official, to the Director of the Division of Air Quality within five (5) days after taking said reading.

[45CSR13, R13-2595 (Condition A.5) and PD10-027] [Stack # 42 & 41]

According to the CAM plan submitted, the differential pressure gauges for the cartridge filter or baghouse shall be operated continuously during operation of the emission units.

[40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stack # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

X Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

### **Monitoring Requirements**

5.2.1. Visible Emissions evaluations will be conducted as specified in Facility-wide requirements 3.2.1. [45CSR§30-5.1c]

5.1.11. The following cartridge filter or baghouse pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the cartridge filter or baghouse to attain the required minimum particulate removal efficiency. Cartridge filter or baghouse pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within 0.1 inch water gauge. An excursion shall be defined as when the Cartridge filter or baghouse pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the cartridge filter or baghouse and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0”

According to the CAM plan submitted, the differential pressure gauges for the cartridge filter or baghouse shall be operated continuously during operation of the emission units.

[40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stack # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1. [45CSR§30-5.1c]

### **Testing Requirements**

5.3.1. The owner or operator shall determine compliance with the particulate matter standards in Section 5.1.1(a) according to Test method and Procedures in 40 C.F.R. §60.675.

[40 C.F.R. §60.675; 45CSR16]

NA [R30-06500001-2014 (MM01 & MM02) sections 6.3.]

### **Recordkeeping Requirements**

Recordkeeping will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.4.1., 3.4.2., 3.4.3 and 3.4.4. [45CSR§30-5.1c]

The monitoring required in R30-06500001-2014 (MM01 & MM02) sections 6.2.2 will be recorded. [45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter and the wet scrubber during operation on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

Qualified personnel shall perform visual inspections of the fabric filters and wet scrubber control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters and wet scrubber. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

General recordkeeping requirements. (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements. [40 C.F.R. §64.9(b); 45CSR§30-5.1.c.]

5.4.11. The permittee shall keep records of monitoring requirements of Section 5.2 as specified in Sections 3.4.1, 3.4.2. [45CSR§30-5.1c]

5.4.12. The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis.

[40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.13. Qualified personnel shall perform visual inspections of the fabric filters control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters. The results of inspection and performance of routine maintenance shall be recorded.

[40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.14. *General recordkeeping requirements.* (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

[40 C.F.R. §64.9(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

### Reporting Requirements

5.5.1. Reserved.

5.5.2. (a) *General reporting requirements.* (1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

(2) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(iii) A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

Reporting will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.5.6 and 3.5.8. [45CSR§30-5.1c]

General reporting requirements.

(5) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(vii) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(viii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R.

§64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> Microsizer #3, AIRSI12, AIRSI13, Tailing Bins, PNEU2, PNEU4, BIN7, #1 & #2 Pumps, PNEU1, ELEV16, 5 Micron Feed Bin, AIRSE8 - 16, 18 &19, ELEV17, BIN5, BIN4, PACKR7, ELEV23, PACKR4, PACKR3, PACKR5 (1e & 2e)		<b>Emission unit name:</b> Micron Production	
<b>List any control devices associated with this emission unit:</b> CF #11, CF #12, CF #13, CF #20, CF #34, CF #37, CF #38, CF #42			
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Classification (10/15/30/40 Micron), 5 Micron Classification, and associated fugitive emissions.			
<b>Manufacturer:</b> NA		<b>Model number:</b> NA	
<b>Serial number:</b> NA		<b>Construction date:</b> 1998	
<b>Installation date:</b> 1998		<b>Modification date(s):</b> NA	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> 150 TPH			
<b>Maximum Hourly Throughput:</b> 150		<b>Maximum Annual Throughput:</b> 1,314,000 TPY	
<b>Maximum Operating Schedule:</b> 8760 Hours/Year			
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? No</b>			<b>If yes, is it?</b>
<b>Maximum design heat input and/or maximum horsepower rating:</b>			<b>Type and Btu/hr rating of burners:</b>
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
<b>Fuel Type</b>	<b>Max. Sulfur Content</b>	<b>Max. Ash Content</b>	<b>BTU Value</b>

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--
Particulate Matter (PM <sub>2.5</sub> )	--	0.446
Particulate Matter (PM <sub>10</sub> )	--	1.072
Total Particulate Matter (TSP)	--	3.074
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	--
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
Other Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p><b>Notes:</b></p> <p>Total emissions are for all units associated with Micron Production.  Allowable PM Stack Emissions (Type 'a' Source Operation)  [45CSR§7-4.1] [Stacks 1, 7, 10, 11, 12, 13, 20, 27, 39, 40, Wsc#2</p>		
<b>Applicable Requirements</b>		
<p><b>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit with the condition number</u>. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.</b></p> <p><b>Applicable Requirements</b></p> <p>6.1.2. The following Non-NSPS Fabric Filter pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the filters to attain the required minimum particulate removal efficiency. Filter pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within ±0.1 inch water gauge. An excursion shall be defined as when the filter pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the filter and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0”</p>		



According to the CAM plan submitted, the differential pressure gauges for the filters shall be operated continuously during operation of the emission units. [40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stacks #1, 7, 10, 11, 12, 13, 20, 27, 39, 40]

5.1.3.1. The maximum process weight rate for the permitted facilities (Ground Sand Packaging/Loading) shall not exceed 10 tons per hour.

[45CSR13, R13-991] [Ground Sand Packaging/Loading]

5.1.3.2. The particulate emission rate for Emission point 1e {Bulk Bagger (PACKR5), Stack # 34} as defined in Permit application No. 991, shall not exceed 0.1 pounds per hour.

[45CSR13, R13-991] [Stack # 34, Emission Point 1e]

5.1.3.3. The particulate emission rate for Emission point 2e (Room Venting, Stack # 34), as defined in Permit application No. 991, shall not exceed 0.5 pounds per hour.

[45CSR13, R13-991] [Stack # 34, Emission Point 2e]

Note : In original construction, emission points 1e and 2e were controlled by separate baghouses. Bagothouses were replaced by one cartridge filter control device. PD ISSUED 5-16-94.

5.1.4.1. Emissions from Mikropul cartridge baghouse Model CFH-6-V-6"B" Emission point ID No. 37 (Stack # 37) and vented through Air Pollution Control Device ID No. 1C, shall not exceed 0.2 pounds of particulate matter per hour (lb./hr.).

[45CSR13, R13-1917, A.1] [Stack # 37]

5.1.4.2 The maximum amount of processed material charged into the feed bin (air pollution source 6S){5 Micron feed Bin}, return bucket elevator (top) (air pollution source 7S)[ELEV 16]and return bucket elevator (bottom) (air pollution source 8S) {ELEV 17}shall not exceed 37.5 tons per hour (TPH). [45CSR13, R13-1917, A.2] [6S, 7S, 8S]

5.1.4.3. Emissions from Mikropul Cartridge baghouse, Model CFH-6-V-12"B", Emission Point ID No. 38 (Stack # 38), and vented through Air Pollution Control Device ID No. 2C, shall not exceed 0.2 pounds of particulate matter per hour (lb/hr).

[45CSR13, R13-1917, A.3] [Stack # 38]

5.1.4.4. The maximum amount of processed material charged into the bulk storage bin (air pollution source 2S), product bin (air pollution source 1S) [Bin 5] , bulk loading spout (air pollution source 3S), the bagger bin (air pollution source 4S) [MIN-U-SIL Bagger bin], and stone container model 988 DM single spout bagger (air pollution source 5S) [PACKR7] shall not exceed 35.5 tons per hour (TPH).

[45CSR13, R13-1917, A.4] [1S to 5S]

The maximum quantity of material to be processed by the Microsizer #3 and Handling Equipment shall be limited to the following:

Airslide 100 (Stack #41): 8 TPH

[45CSR13, R13-2595 (Condition A.1) and PD10-027] [Stack # 42 & 41]

Maximum particulate matter emissions to the atmosphere shall not exceed the following:

Airslide 100: 0.15 PPH and 0.66 TPY

[45CSR13, R13-2595 (Condition A.2) and PD10-027] [Stack # 42 & 41]

The following fugitive dust control measures as specified in Permit Application R13-2595 shall be installed, maintained, and operated at all times when the facility is in operation in order to minimize fugitive particulate matter emissions:

Airslide 100,: Torit DFT2-4-155 Baghouse (2C) at 99.9%

[45CSR13, R13-2595 (Condition A.3) and PD10-027] [Bagothouses 2C & CF#42; Stack # 42 & 41]

5.1.10.4. The stabilized static pressure loss across baghouse 2C and CF#42 shall remain between 0.5 to 6.0 inches of water. [45CSR13, R13-2595 (Condition A.4) and PD10-027] [Bagothouse 2C & CF#42; Stack # 42 & 41]

5.1.10.5. Except during startup and shutdown, opacity from baghouse 2C and Stack #42 shall not exceed 10 percent based on a six minute block average. In order to determine compliance with this limit the permittee shall conduct monthly visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for stacks #41and #42. These observations shall be conducted during periods of facility operation for a sufficient time interval to determine if the unit has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22. If sources of visible

emissions are identified during the survey, the permittee shall conduct an opacity evaluation in accordance with 40CFR60 Appendix A, Method 9, within 24 hours. A 40CFR60 Appendix A, Method 9 evaluation shall not be required if the visible emission condition is corrected within 24 hours and the units are operated at normal operating conditions with no visible emissions being observed. Records shall be maintained on site reporting the results of each test. Upon observing any visible emissions in excess of twenty percent (20%) opacity, or excess of forty (40%) for any period or periods aggregating more than five (5) minutes in any sixty (60) minute period, the Company shall submit a written report, certified by a responsible official, to the Director of the Division of Air Quality within five (5) days after taking said reading.

[45CSR13, R13-2595 (Condition A.5) and PD10-027] [Stack # 42 & 41]

Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

#### **Monitoring Requirements**

Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1. [45CSR§30-5.1c]

5.2.1. Visible Emissions evaluations will be conducted as specified in Facility-wide requirements 3.2.1. [45CSR§30-5.1c]

5.2.2. The permittee shall monitor and maintain records of daily observations of pressure drop across baghouses 2C and CF#42.

[45CSR13, R13-2595, B.9 and PD10-027] [Baghouses 2C & CF#42; Stack # 28, 29 & 41]

5.2.4. Maintenance records for the air pollution control devices listed in 5.1.10.3. shall be maintained on site for a period of five (5) years. Malfunctions shall be documented in writing and records of these malfunctions maintained at the facility for a period of five (5) years. Certified copies of said records shall be made available to the Director or his/her duly authorized representative upon request. At a minimum, the following information shall be documented for each malfunction:

- a. The equipment involved in the malfunction and the associated cause.
- b. Steps taken to correct the malfunction.
- c. The steps taken to minimize the emissions during the malfunction.
- d. The duration of the malfunction.
- e. The increase in emissions during the malfunction.
- f. Steps taken to prevent a similar malfunction in the future.

[45CSR13, R13-2595, B.8 and PD10-027] [Baghouses 2C & CF#42; Stack # 42 & 41]

5.1.11. The following cartridge filter or baghouse pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the cartridge filter or baghouse to attain the required minimum particulate removal efficiency. Cartridge filter or baghouse pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within 0.1 inch water gauge. An excursion shall be defined as when the Cartridge filter or baghouse pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the cartridge filter or baghouse and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0"

According to the CAM plan submitted, the differential pressure gauges for the cartridge filter or baghouse shall be operated continuously during operation of the emission units.

[40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stack # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

#### **Testing Requirements**

5.3.1. The owner or operator shall determine compliance with the particulate matter standards in Section 5.1.1(a) according to Test method and Procedures in 40 C.F.R. §60.675.

[40 C.F.R. §60.675; 45CSR16]

NA [R30-06500001-2014 (MM01 & MM02) sections 6.3.]

#### **Recordkeeping Requirements**

5.4.11. The permittee shall keep records of monitoring requirements of Section 5.2 as specified in Sections 3.4.1, 3.4.2. [45CSR§30-5.1c]

5.4.12. The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.13. Qualified personnel shall perform visual inspections of the fabric filters control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.14. *General recordkeeping requirements.* (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 C.F.R. §64.9(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

Recordkeeping will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.4.1., 3.4.2., 3.4.3 and 3.4.4. [45CSR§30-5.1c]

The monitoring required in R30-06500001-2014 (MM01 & MM02) sections 6.2.2 will be recorded. [45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter and the wet scrubber during operation on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

Qualified personnel shall perform visual inspections of the fabric filters and wet scrubber control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters and wet scrubber. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

*General recordkeeping requirements.* (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements. [40 C.F.R. §64.9(b); 45CSR§30-5.1.c.]

## **Reporting Requirements**

5.5.1. Reserved.

5.5.2. (a) *General reporting requirements.* (1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

(2) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(iii) A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

Reporting will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.5.6 and 3.5.8. [45CSR§30-5.1c]

General reporting requirements.

(7) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(x) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(xi) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> BIN4 SPOUT, Tank #7 & Tank #8, Tank #15 & Tank #16, Tanks #13 & #17, Tanks #9 - #12, Tanks #14 & #18, Steel Tank #21, CGS Tank, PEMCOTank, Supersil Storage Silos #1 - #4 (1e-4e), MIN-U-SIL storage silo #5 (5e), MIN-U-SIL storage silos #6 & #7 (6e & E1), MIN-U-SIL storage silo #8 (6e & E1), ISTANK18, Steel Storage Tank, SPOUT1, SPOUT2, SPOUT3, SPOUT4, SPOUT5, SPOUT6, QROK SPOUTS, #1 Stone Tank, #2 Stone Tank		<b>Emission unit name:</b> Storage Structures	
		<b>List any control devices associated with this emission unit:</b> CF #7, CF #9, CF #13, CF #27, CF #28, CF #29, CF #33, CF #34, CF #38	
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Storage Structures and associated fugitive emissions			
<b>Manufacturer:</b> NA		<b>Model number:</b> NA	
		<b>Serial number:</b> NA	
<b>Construction date:</b> 1981		<b>Installation date:</b> 1981	
		<b>Modification date(s):</b> NA	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> Varies			
<b>Maximum Hourly Throughput:</b> Varies		<b>Maximum Annual Throughput:</b> Varies	
		<b>Maximum Operating Schedule:</b> 8760 Hours/Year	
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? No</b>			<b>If yes, is it?</b>
<b>Maximum design heat input and/or maximum horsepower rating:</b>			<b>Type and Btu/hr rating of burners:</b>
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
<b>Fuel Type</b>	<b>Max. Sulfur Content</b>	<b>Max. Ash Content</b>	<b>BTU Value</b>

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--
Particulate Matter (PM <sub>2.5</sub> )	--	3.608
Particulate Matter (PM <sub>10</sub> )	--	5.069
Total Particulate Matter (TSP)	--	6.260
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	--
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
Other Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p><b>Notes:</b></p> <p>Total emissions are for all units associated with Storage Structures.  Allowable PM Stack Emissions (Type 'a' Source Operation)  [45CSR§7-4.1] [Stacks 1, 7, 10, 11, 12, 13, 20, 27, 39, 40, Wsc#2]</p>		
<p><b>Applicable Requirements</b></p> <p><b>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.</b></p> <p><b>Applicable Requirements</b></p> <p>5.1.2. The following emission limits shall not be exceeded: Storage Silo #6: 0.05 PPH, Storage Silo #5: 0.05 PPH, Stack #33: 0.2 PPH  [45CSR13, R13-750] [Stacks 28, 29 &amp;33]</p> <p>5.1.3.1. The maximum process weight rate for the permitted facilities (Ground Sand Packaging/Loading) shall not exceed 10 tons per hour.  [45CSR13, R13-991] [Ground Sand Packaging/Loading]</p>		

5.1.3.2. The particulate emission rate for Emission point 1e {Bulk Bagger (PACKR5), Stack # 34} as defined in Permit application No. 991, shall not exceed 0.1 pounds per hour.

[45CSR13, R13-991] [Stack # 34, Emission Point 1e]

5.1.3.3. The particulate emission rate for Emission point 2e (Room Venting, Stack # 34), as defined in Permit application No. 991, shall not exceed 0.5 pounds per hour.

[45CSR13, R13-991] [Stack # 34, Emission Point 2e]

Note : In original construction, emission points 1e and 2e were controlled by separate baghouses. Bagothouses were replaced by one cartridge filter control device. PD ISSUED 5-16-94.

5.1.4.3. Emissions from Mikropul Cartridge baghouse, Model CFH-6-V-12"B", Emission Point ID No. 38 (Stack # 38), and vented through Air Pollution Control Device ID No. 2C, shall not exceed 0.2 pounds of particulate matter per hour (lb/hr).

[45CSR13, R13-1917, A.3] [Stack # 38]

5.1.4.4. The maximum amount of processed material charged into the bulk storage bin (air pollution source 2S), product bin (air pollution source 1S) [Bin 5] , bulk loading spout (air pollution source 3S), the bagger bin (air pollution source 4S) [MIN-U-SIL Bagger bin], and stone container model 988 DM single spout bagger (air pollution source 5S) [PACKR7] shall not exceed 35.5 tons per hour (TPH).

[45CSR13, R13-1917, A.4] [1S to 5S]

5.1.5. Particulate matter (PM) emissions shall not exceed the following hourly and annual emission limits: Stack #28: 0.70 PPH and 0.07 TPY

[45CSR13, R13-1970, A.1] [Stack # 28]

5.1.9.1. The maximum hourly and annual processing rates of sand through the bulk sand bagger shall not exceed 30 TPH and 262,800 TPY, based on 8,760 hours of operation per year.

[45CSR13, R13-2299, A.1] [PACKR8]

5.1.9.2. The permittee shall operate the air pollution control device, the Torit Model Number 4DF32-155 Pulse Type Cartridge Dust Collector (Equipment ID No. 1C; Emission Point ID No. 1E - Stack #9), as outlined in Permit Application R13-2299.

[45CSR13, R13-2299, A.2] [Stack # 9]

5.1.9.3. In accordance with the requirements of 40 CFR 60, Subpart OOO, the maximum particulate (PM) emissions from the air pollution control device, the Torit Model Number 4DF32-155 Pulse Type Cartridge Dust Collector (Emission Point ID No. 1E - Stack #9), shall not exceed 0.022 grains per dry standard cubic foot (0.05 grams/dry standard meter).

[45CSR13, R13-2299, A.3; 40 C.F.R. § 60.672; 45CSR16] [Stack # 9]

6.1.2. The following Non-NSPS Fabric Filter pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the filters to attain the required minimum particulate removal efficiency. Filter pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within 0.1 inch water gauge. An excursion shall be defined as when the filter pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the filter and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0"

According to the CAM plan submitted, the differential pressure gauges for the filters shall be operated continuously during operation of the emission units. [40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stacks #1, 7, 10, 11, 12, 13, 20, 27, 39, 40]

X Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

### **Monitoring Requirements**

Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1. [45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 9, 25, 28, 29, 33, 34, 36, 37, 38 & 41]

Qualified personnel shall perform visual inspections of the fabric filters control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 9, 25, 28, 29, 33, 34, 36, 37, 38 & 41]

5.2.1. Visible Emissions evaluations will be conducted as specified in Facility-wide requirements 3.2.1. [45CSR§30-5.1c]

5.2.2. The permittee shall monitor and maintain records of daily observations of pressure drop across baghouses 2C and CF#42.

[45CSR13, R13-2595, B.9 and PD10-027] [Baghouses 2C & CF#42; Stack # 28, 29 & 41]

5.2.4. Maintenance records for the air pollution control devices listed in 5.1.10.3. shall be maintained on site for a period of five (5) years. Malfunctions shall be documented in writing and records of these malfunctions maintained at the facility for a period of five (5) years. Certified copies of said records shall be made available to the Director or his/her duly authorized representative upon request. At a minimum, the following information shall be documented for each malfunction:

- a. The equipment involved in the malfunction and the associated cause.
- b. Steps taken to correct the malfunction.
- c. The steps taken to minimize the emissions during the malfunction.
- d. The duration of the malfunction.
- e. The increase in emissions during the malfunction.
- f. Steps taken to prevent a similar malfunction in the future.

[45CSR13, R13-2595, B.8 and PD10-027] [Baghouses 2C & CF#42; Stack # 42 & 41]

5.1.11. The following cartridge filter or baghouse pressure drop ranges obtained from stack test and historical data are an indicator of compliance for the cartridge filter or baghouse to attain the required minimum particulate removal efficiency. Cartridge filter or baghouse pressure drop shall be monitored at least once per day. The monitoring device is to be certified to be accurate within 0.1 inch water gauge. An excursion shall be defined as when the Cartridge filter or baghouse pressure drop falls outside the following range. When an excursion occurs, the permittee shall conduct an inspection of the cartridge filter or baghouse and corrective actions shall be taken to return the pressure drop within the following range: 0.5-6.0”

According to the CAM plan submitted, the differential pressure gauges for the cartridge filter or baghouse shall be operated continuously during operation of the emission units.

[40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.] [Stack # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

### **Testing Requirements**

5.3.1. The owner or operator shall determine compliance with the particulate matter standards in Section 5.1.1(a) according to Test method and Procedures in 40 C.F.R. §60.675.

[40 C.F.R. §60.675; 45CSR16]

NA [R30-06500001-2014 (MM01 & MM02) sections 6.3.]

### **Recordkeeping Requirements**

For the #9 Torit Model No. 4DF32-155 Pulse Type Cartridge Dust Collector (Equipment ID No. 1C-CF#9):

a. Maintenance records shall be maintained on site for a period of five (5) years. Certified copies of these records shall



be made available to the Director or his duly authorized representative upon request.

b. Malfunctions shall be documented in writing and records of these malfunctions maintained at the facility for a period of 5 years. Certified copies of these records shall be made available to the Director or his duly authorized representative upon request. At minimum, the following information shall be documented for each malfunction:

- The cause of malfunction.
- Steps taken to:
  - correct the malfunction.
  - minimize emissions during malfunction.
- The duration of the malfunction in hours.
- The estimated increase in emissions during the malfunction.
- Any changes/modifications made to equipment and/or procedures that will help prevent future recurrence of the malfunction.

[45CSR13, R13-2423, B.5] [CF#9]

5.4.11. The permittee shall keep records of monitoring requirements of Section 5.2 as specified in Sections 3.4.1, 3.4.2. [45CSR§30-5.1c]

5.4.12. The permittee shall monitor and record the differential pressure drop across each fabric filter (during operation) on a daily basis.

[40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.13. Qualified personnel shall perform visual inspections of the fabric filters control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters. The results of inspection and performance of routine maintenance shall be recorded.

[40 C.F.R. §64.3(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

5.4.14. *General recordkeeping requirements.* (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

[40 C.F.R. §64.9(b); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]

Recordkeeping will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.4.1., 3.4.2., 3.4.3 and 3.4.4. [45CSR§30-5.1c]

The monitoring required in R30-06500001-2014 (MM01 & MM02) sections 6.2.2 will be recorded. [45CSR§30-5.1c]

The permittee shall monitor and record the differential pressure drop across each fabric filter and the wet scrubber during operation on a daily basis. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

Qualified personnel shall perform visual inspections of the fabric filters and wet scrubber control devices at least monthly and perform routine maintenance to assure proper operation of the fabric filters and wet scrubber. The results of inspection and performance of routine maintenance shall be recorded. [40 C.F.R. §64.3(b); 45CSR§30-5.1.c.]

*General recordkeeping requirements.* (1) The owner or operator shall comply with the recordkeeping requirements specified in 40 C.F.R. §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 C.F.R. §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40CFR64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review and does not conflict with other applicable recordkeeping requirements. [40 C.F.R. §64.9(b); 45CSR§30-5.1.c.]

## Reporting Requirements

5.5.1. Reserved.

5.5.2. (a) *General reporting requirements.* (1) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

(2) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(iii) A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R. §64.8.

Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

**[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.] [CF # 6, 9, 25, 28, 29, 33, 34, 36, 37, 38, 41 & 42]**

Reporting will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.5.6 and 3.5.8. [45CSR§30-5.1c]

General reporting requirements.

(9) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(xiii) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(xiv) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R.

§64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.]

(11) On and after the date specified in 40 C.F.R. §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with 40 C.F.R. §70.6(a)(3)(iii) of this chapter.

) A report for monitoring under this part shall include, at a minimum, the information required under 40 C.F.R. §70.6(a)(3)(iii) of this chapter and the following information, as applicable:

(xvi) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(xvii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

) A description of the actions taken to implement a QIP during the reporting period as specified in 40 C.F.R.

§64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

**If no, complete the Schedule of Compliance Form as ATTACHMENT F.**

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> STOCK1, CRUSH1, CRUSH2, SCREN1, SCREN2, SCREN3. TRUCK1, FEEDER1, CRUSH1, SCREN1, SCRENBC1, SCRENBC2, SCRENBC3, STACKBC1, STACKBC2, CRUSH2, CRUSHSCR1, SCRENBC4, SCRENBC5, SCRENBC6, SCRENBC7		<b>Emission unit name:</b> Limestone System	
<b>List any control devices associated with this emission unit:</b> CF #7, CF #9, CF #13, CF #27, CF #28, CF #29, CF #33, CF #34, CF #38			
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Limestone System and associated fugitive emissions			
<b>Manufacturer:</b> NA		<b>Model number:</b> NA	
<b>Serial number:</b> NA		<b>Construction date:</b> 1981	
<b>Installation date:</b> 1981		<b>Modification date(s):</b> NA	
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> ~21 TPH			
<b>Maximum Hourly Throughput:</b> ~21 TPH		<b>Maximum Annual Throughput:</b> 182,500 TPY	
<b>Maximum Operating Schedule:</b> 8760 Hours/Year			
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? No</b>			<b>If yes, is it?</b>
<b>Maximum design heat input and/or maximum horsepower rating:</b>			<b>Type and Btu/hr rating of burners:</b>
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
<b>Fuel Type</b>	<b>Max. Sulfur Content</b>	<b>Max. Ash Content</b>	<b>BTU Value</b>

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--
Particulate Matter (PM <sub>2.5</sub> )	--	0.436
Particulate Matter (PM <sub>10</sub> )	--	9.563
Total Particulate Matter (TSP)	--	28.446
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	--
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
Other Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p><b>Notes:</b></p> <p>Total emissions are for all units associated with Limestone System.</p>		
<b><i>Applicable Requirements</i></b>		
<p><b>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.</b></p> <p><b>Applicable Requirements</b></p> <p>4.1.1. In accordance with the information filed in Permit Application R13-3535, the equipment/processes identified under Section 1.0 Emission Units of this permit shall be installed, maintained, and operated so as to minimize any fugitive escape of pollutants, shall not exceed the listed maximum design capacities and/or throughputs, and shall use the specified control devices.</p> <p>4.1.2. The maximum transfer rate of material through the crushers and screens shall not exceed hourly and annual throughput rates identified under Section 1.0 Emission Units of this permit. Said limits shall be based on a 12-month</p>		

rolling total.

4.1.3. The permitted facility shall comply with all applicable requirements of 45CSR§7 - “To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations,” provided that the facility shall comply with any more stringent requirements as may be set forth under section 4.1. of this permit. The pertinent sections of 45CSR§7 applicable to this facility include, but are not limited to, the following:

4.1.3.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7. [45CSR§7-3.1.]

4.1.3.2. The provisions of subsection 3.1 shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period. [45CSR§7-3.2.]

4.1.3.3. No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A found at the end of this rule. [45CSR§7-4.1.]

4.1.3.4. No person shall cause, suffer, allow, or permit any manufacturing process generating fugitive particulate matter to operate that is not equipped with a system to minimize the emissions of fugitive particulate matter. To minimize means that a particulate capture or suppression system shall be installed to ensure the lowest fugitive particulate emissions reasonably achievable. The permitted facility shall comply with all applicable requirements of 45CSR§7, with the exception of any more stringent limitations set forth in Section 4.1. of this permit. [45CSR§7-5.1.]

4.1.3.5. The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment. [45CSR§7-5.2.]

4.1.4. The facility is subject to 40 CFR 60 Subpart OOO, including but not limited to following:

4.1.4.1. Except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart. [40CFR 60.670(a)(1)]

4.1.4.2. An affected facility under paragraph (a) of this section that commences construction, modification or reconstruction after August 31, 1983, is subject to the requirements of this part. [40CFR 60.670(e)]

4.1.4.3. Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.8. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems. [40CFR 60.672(b)]

4.1.4.4. A crusher shall not discharge fugitive emissions into the atmosphere greater than 12 percent opacity; [40CFR§60.672(b)]

4.1.4.5. Fugitive emission from the transfer points on the belt conveyors shall not discharge fugitive emissions into the atmosphere greater than 7 percent opacity; [40CFR§60.672(b)]

4.1.5. Owners and Operators of Engines classified as Nonroad. Owners and operators of engines classified as nonroad must ensure that the engine does not remain at a location for more than 12 months, with location being any single site at a building, structure, facility or installation. [40CFR§1068.30]

A nonroad engine ceases to be a nonroad engine and becomes a new stationary engine if - (1) At any time, it meets the criteria specified in paragraph (2)(iii) in the definition of “nonroad engine”

in § 1068.30. For example, a portable generator engine ceases to be a nonroad engine if it is used or will be used in a single specific location for 12 months or longer. If we determine that an engine will be or has been used in a single specific location for 12 months or longer, it ceased to be a nonroad engine when it was placed in that location.

[40 CFR § 1068.31(e)(1)]

4.1.6. Operation and Maintenance of Air Pollution Control Equipment. The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR§13-5.10.]

Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

### Monitoring Requirements

4.2.1. For the purpose of determining compliance with the opacity limits of 40 CFR 60 Subpart OOO, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

a. The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course.

b. Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source (stack, transfer point, fugitive emission source, etc.) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions.

c. If visible emissions are present at a source(s) for three (3) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

4.2.2. The permittee shall install instrumentation to measure both volumetric flow rate and water pressure as supplied to the facility's water spray bars on a daily basis. At the beginning and end of each operating day, the water pressure and ambient temperature shall be recorded. At the end of each operating day, the tonnage of rock processed, the amount of water (measured in gallons) utilized that day, the number of hours of operation, and a description of the day's weather conditions shall be recorded. Such records shall be maintained in accordance with Condition 3.4.1. of this permit.

4.2.3. The permittee shall perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The permittee must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under §60.676(b). Such records shall be maintained in accordance with Condition 3.4.1. of this permit. [40CFR§§60.674(b)]

The permittee may combine the records as required in Condition 4.2.2. and records of these monthly inspections into one document or logbook.

### Testing Requirements

4.3.1. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of equipment, the permittee shall conduct performance test(s) to demonstrate compliance with the visible emission standards in Condition 4.1.4. for the sources listed in Section 1.0 of this permit. Such testing conducted in accordance with the following. [40CFR§60.8(a)]

(a) Such testing shall be conducted in accordance with Condition 3.3.1. of this permit.

(b) Such testing shall be conducted while the piece is processing or handling stone equal to or greater than 90 percent its hourly throughput limit as listed in Section 1.0 or at the maximum throughput possible.

(c) Method 9 of Appendix A-4, 40 CFR 60 shall be used with the following additions;

(i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

[40CFR§§60.675(c)(1)(i)]

(ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of 40CFR60, Section 2.1) must be followed. [40CFR§§60.675(c)(1)(ii)]

(iii) At locations where water sprays are employed at, the water mist must not be confused with particulate matter emissions and is not be considered visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible. [40CFR§§60.675(c)(1)(iii)]

(iv) Duration of the Method 9 Observation must be 30 minutes (five 6-minute observations). Compliance with the visible emission standard in Conditions 4.1.1.c. and f. must be based on the average of five 6-minute averages.

[40CFR§§60.675(c)(3)]

(v) If emissions from two or more affected sources continuously interfere so that the opacity from an individual affected facility cannot be read, either of the following procedures may be used:

1. Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream. [40CFR§§60.675(e)(1)(i)]

2. Separate the emissions so that the opacity of emissions from each affected facility can be read.

[40CFR§§60.675(e)(1)(ii)]

(vi) A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:

1. No more than three emission points may be read concurrently. [40CFR§§60.675(e)(2)(i)]

2. All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points. [40CFR§§60.675(e)(2)(ii)]

3. If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

[40CFR§§60.675(e)(2)(iii)]

(d) During such testing, the permittee shall monitor and record the water pressure, flow rate of the water sprays, and the hourly throughput or process rate of the piece of equipment at which the observation is occurring. Such records shall include the water pressure and flow rate at the beginning and the at end of the last observation for the actual operation day. Such records shall be included in with the test results and maintained in accordance with Condition 3.4.1 of this permit.

### **Recordkeeping Requirements**

4.4.1. Record of Monitoring. The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.

4.4.2. Record of Maintenance of Air Pollution Control Equipment. For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

4.4.3. Record of Malfunctions of Air Pollution Control Equipment. For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.



For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

4.4.4. For the purpose of determining compliance with maximum throughput and operation limits set forth in 4.1.2., the applicant shall maintain certified daily and monthly records. An example form is included as Appendix C. Compliance will be determined on a 12- month rolling total. These records shall be maintained on-site for a period of five (5) years and be made available to the Director of the Division of Air Quality or his/her duly authorized representative upon request.

4.4.5. The permittee shall maintain records of all monitoring data required by Section 4.2.1 documenting the date and time of each visible emission check, the emission point or equipment / source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6-10 mph NE wind) during the visual emission check(s). An example form is supplied as Appendix A. Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the normal monthly evaluation, the record of observation may note "out of service" (O/S) or equivalent.

### **Reporting Requirements**

4.5.1. Test results shall be submitted to the Director no more than sixty (60) days after the date the testing takes place.

4.5.2. Any exceedances of the allowable visible emission requirement for any emission source discovered during observation using 40CFR Part 60, Appendix A, Method 9 must be reported in writing to the Director as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the exceedances, and any corrective measures taken or planned.

4.5.3. The permittee shall submit written notification of the following items within the specified time frames to the Director:

A notification of the actual date of initial startup of an affected facility dated within 15 days after such date. [40CFR§60.7(3)]

**Are you in compliance with all applicable requirements for this emission unit? Yes**

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> Roads, Stockpile, Golf Sand Stockpile, Float Sand Stockpile, Quarry		<b>Emission unit name:</b> Miscellaneous	
<b>List any control devices associated with this emission unit:</b>			
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Miscellaneous sources and associated fugitive emissions			
<b>Manufacturer:</b> NA		<b>Model number:</b> NA	
<b>Serial number:</b> NA			
<b>Construction date:</b> 1970		<b>Installation date:</b> 1970	
<b>Modification date(s):</b> NA			
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> Varies			
<b>Maximum Hourly Throughput:</b> Varies		<b>Maximum Annual Throughput:</b> Varies	
<b>Maximum Operating Schedule:</b> 8760 Hours/Year			
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? No</b>			<b>If yes, is it?</b>
<b>Maximum design heat input and/or maximum horsepower rating:</b>			<b>Type and Btu/hr rating of burners:</b>
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
<b>Fuel Type</b>	<b>Max. Sulfur Content</b>	<b>Max. Ash Content</b>	<b>BTU Value</b>

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--
Particulate Matter (PM <sub>2.5</sub> )	--	15.716
Particulate Matter (PM <sub>10</sub> )	--	94.157
Total Particulate Matter (TSP)	--	343.939
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	--
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
Hazardous Air Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p><b>Notes:</b></p> <p>Total emissions are for all units associated with Miscellaneous Sources.</p>		
<b><i>Applicable Requirements</i></b>		
<p>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (<i>Note: Title V permit condition numbers alone are not the underlying applicable requirements</i>). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.</p> <p><b>Applicable Requirements</b></p>		
<p><input checked="" type="checkbox"/> Permit Shield</p>		

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

**Monitoring Requirements**

**Testing Requirements**

**Recordkeeping Requirements**

**Reporting Requirements**

**Are you in compliance with all applicable requirements for this emission unit? Yes**

**If no, complete the Schedule of Compliance Form as ATTACHMENT F.**

<b>Emission Unit Description</b>			
<b>Emission unit ID number:</b> Tank No. 1 - Tank No. 8, Tank No. 11 - Tank No. 13, Tank No. 16, Tank No. 17, Tank No. 24 - Tank No. 33		<b>Emission unit name:</b> Miscellaneous	
<b>List any control devices associated with this emission unit:</b>			
<b>Provide a description of the emission unit (type, method of operation, design parameters, etc.):</b> Liquid Storage Tank Emissions.			
<b>Manufacturer:</b> NA		<b>Model number:</b> NA	
<b>Serial number:</b> NA			
<b>Construction date:</b> Varies		<b>Installation date:</b> Varies	
<b>Modification date(s):</b> NA			
<b>Design Capacity (examples: furnaces - tons/hr, tanks - gallons):</b> Varies			
<b>Maximum Hourly Throughput:</b> Varies		<b>Maximum Annual Throughput:</b> Varies	
<b>Maximum Operating Schedule:</b> 8760 Hours/Year			
<b>Fuel Usage Data (fill out all applicable fields)</b>			
<b>Does this emission unit combust fuel? No</b>			<b>If yes, is it?</b>
<b>Maximum design heat input and/or maximum horsepower rating:</b>			<b>Type and Btu/hr rating of burners:</b>
<b>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</b>			
<b>Describe each fuel expected to be used during the term of the permit.</b>			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	--	--
Nitrogen Oxides (NO <sub>x</sub> )	--	--
Lead (Pb)	--	--
Particulate Matter (PM <sub>2.5</sub> )	--	--
Particulate Matter (PM <sub>10</sub> )	--	--
Total Particulate Matter (TSP)	--	--
Sulfur Dioxide (SO <sub>2</sub> )	--	--
Volatile Organic Compounds (VOC)	--	0.018
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
None	--	--
Other Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p><b>Notes:</b></p> <p>Total emissions are for all units associated with Liquid Storage Tank Sources.</p>		
<b><i>Applicable Requirements</i></b>		
<p><b>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.</b></p> <p><b>Applicable Requirements</b></p>		
<p><input checked="" type="checkbox"/> Permit Shield</p>		

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

**Monitoring Requirements**

**Testing Requirements**

**Recordkeeping Requirements**

**Reporting Requirements**

**Are you in compliance with all applicable requirements for this emission unit? Yes**

**If no, complete the Schedule of Compliance Form as ATTACHMENT F.**

Attachment G

Air Pollution Control Device Forms



### ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #1	<b>List all emission units associated with this control device.</b> CRUSH2, CONV3, CONV2	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-T4-32	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

**Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).**

Indicator Range for Pressure Drop (in H2O): 1.4-3.0

**Is this device subject to the CAM requirements of 40 C.F.R. 64? No**

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification**

Uncontrolled emission factors in AP-42 Chapter 11.19.2, Table 11.19.2-2 "Crushed Stone Processing Operations (8/04)"

**Describe the parameters monitored and/or methods used to indicate performance of this control device.**

The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.

## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> WSc #2	<b>List all emission units associated with this control device.</b> CRUSH3	
<b>Manufacturer:</b> Sly	<b>Model number:</b> Impinjet 270	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>		
Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
Carbon Drum(s)	X Other Wet Scrubber	Settling Chamber
Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
Thermal Incinerator	Flare	Other (describe
Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	> 98%
PM10	99.99%	> 98%
PM2.5	99.99%	> 98%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 1.5-7.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? No</b> If Yes, <b>Complete ATTACHMENT H</b> If No, <b>Provide justification</b> Uncontrolled emission factors in AP-42 Chapter 11.19.2, Table 11.19.2-2 "Crushed Stone Processing Operations (8/04)"
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> WSc #3	<b>List all emission units associated with this control device.</b> DRYER1 (3s)	
<b>Manufacturer:</b> Sly	<b>Model number:</b> Impinjet 1130	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>		
Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
Carbon Drum(s)	X Other Wet Scrubber	Settling Chamber
Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
Thermal Incinerator	Flare	Other (describe
Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	> 98%
PM10	99.99%	> 98%
PM2.5	99.99%	> 98%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-5.8		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #6	<b>List all emission units associated with this control device.</b> VIBFD5, ELEV4, CONV39-41, CONV29, CONV30, BE01, BE02, LS01	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit 2DFA - 155	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-5.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? No</b> If Yes, <b>Complete ATTACHMENT H</b> If No, <b>Provide justification</b> Uncontrolled emission factors in AP-42 Chapter 11.19.2, Table 11.19.2-2 "Crushed Stone Processing Operations (8/04)"
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #7	<b>List all emission units associated with this control device.</b> SCREN10-13 & SCREN2-4, SCREN17 (1E), ELEV1, ELEV2, ELEV3, CONV31, CONV33, TANK#13 & #17, TANK #7 & #8, TANK #15 & #16, TANK #14 & #18	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DFT-32-SH	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 3.0-5.5		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? No</b> If Yes, <b>Complete ATTACHMENT H</b> If No, <b>Provide justification</b> Uncontrolled emission factors in AP-42 Chapter 11.19.2, Table 11.19.2-2 "Crushed Stone Processing Operations (8/04)"
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> WSc #8	<b>List all emission units associated with this control device.</b> DRYER2 (8s)	
<b>Manufacturer:</b> In House	<b>Model number:</b> NA	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>		
Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
Carbon Drum(s)	X	Other Wet Scrubber
Catalytic Incinerator	Condenser	Settling Chamber Dry Plate Electrostatic Precipitator
Thermal Incinerator Wet Plate Electrostatic Precipitator	Flare	Other (describe)

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	> 90%
PM10	99.99%	> 90%
PM2.5	99.99%	> 90%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 0.5-2.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #9	<b>List all emission units associated with this control device.</b> SCREN18 (1E), PACKR8 (IE), ELEV 19, ELEV20, ISTANK18, Steel Storage Tank, and SPOUT4	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit 4DFT-32-155	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 1.5-4.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? No</b> If Yes, <b>Complete ATTACHMENT H</b> If No, <b>Provide justification</b> Uncontrolled emission factors in AP-42 Chapter 11.19.2, Table 11.19.2-2 "Crushed Stone Processing Operations (8/04)"
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #10	<b>List all emission units associated with this control device.</b> SCREW3, #1 MILL FEED BIN, #2 MILL FEED BIN, FEEDB1, FEEDB2, SCREW6, AIRSD7, ELEV6, ELEV7	
<b>Manufacturer:</b> Mikropul	<b>Model number:</b> CFH 40T-20-B	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-3.5		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #11	<b>List all emission units associated with this control device.</b> SCREW5, #3 MILL FEED BINS, #4 MILL FEED BIN, FEEDB3, FEEDB4, SCREW7, AIRSD8, ELEV8, ELEV9, PNEU4, AIRSI13 and ELEV16	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DFT 4-48	<b>Installation date:</b> 3-15-2012

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 0.5-6.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #12	<b>List all emission units associated with this control device.</b> #5 MILL FEED BIN, FEEDB5, MILL6, ELEV10, #6 MILL FEED BIN, FEEDB6, AIRSD3, ELEV11, ELEV15, PNEU2, BIN7, #1 AND #2 PUMPS, AIRSI12, TAILING BINS	
<b>Manufacturer:</b> Mikropul	<b>Model number:</b> CFH 40T-20-B	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-3.5		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #13	<b>List all emission units associated with this control device.</b> ELEV23, CGS Tank, PEMCO Tank, SPOUT6	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-T3-24	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 1.8-4.5		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b>  If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>  The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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### ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #15	<b>List all emission units associated with this control device.</b> ELEV25, FEEDB25, FEEDB26, SCREN25, BIN25, and PNEU25	
<b>Manufacturer:</b> Cellulosic	<b>Model number:</b> Cartridge Filter	<b>Installation date:</b> 2016

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-3.5
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<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2016 R13 application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R13-2595A). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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### ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> 1C	<b>List all emission units associated with this control device.</b> 1S, 2S, 3S, and 4S	
<b>Manufacturer:</b> Torit	<b>Model number:</b> DFT2-4-155	<b>Installation date:</b> 2016

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-3.5
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<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2016 R13 application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R13-2595A). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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### ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> 2C	<b>List all emission units associated with this control device.</b> 5S	
<b>Manufacturer:</b> Mikropul Torit	<b>Model number:</b> 8204B Baghouse DF2DF4	<b>Installation date:</b> 2016

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-3.5
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<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2016 R13 application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R13-2595A). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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### ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #45	<b>List all emission units associated with this control device.</b> AIRSE25	
<b>Manufacturer:</b> Ecutech	<b>Model number:</b> Cartridge Filter	<b>Installation date:</b> 2016

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-3.5
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<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2016 R13 application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R13-2595A). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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### ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #46	<b>List all emission units associated with this control device.</b> HOPPER25	
<b>Manufacturer:</b> Cellulosic	<b>Model number:</b> Cartridge Filter	<b>Installation date:</b> 2016

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

**Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).**

Indicator Range for Pressure Drop (in H2O): 2.0-3.5

**Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes**

If Yes, **Complete ATTACHMENT H** CAM Plan was submitted with 2016 R13 application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R13-2595A).

If No, **Provide justification**

**Describe the parameters monitored and/or methods used to indicate performance of this control device.**

The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.



### ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #47	<b>List all emission units associated with this control device.</b> TANK25	
<b>Manufacturer:</b> Cellulosic	<b>Model number:</b> Cartridge Filter	<b>Installation date:</b> 2016

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

**Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).**

Indicator Range for Pressure Drop (in H2O): 2.0-3.5

**Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes**

If Yes, **Complete ATTACHMENT H** CAM Plan was submitted with 2016 R13 application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R13-2595A).

If No, **Provide justification**

**Describe the parameters monitored and/or methods used to indicate performance of this control device.**

The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.

## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #20	<b>List all emission units associated with this control device.</b> PACKR3 and PACKR4	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-T4-16	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 1.6-5.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b>  If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>  The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #25	<b>List all emission units associated with this control device.</b> CONV25, SCREN16, CONV26, and CONV27	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-4DF-48	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 1.0-3.6		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
---

<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #27	<b>List all emission units associated with this control device.</b> CONV51, PULVERIZER TANK #19, PULVERIZER TANK #20, TANKS #9-#12, STEEL TANK #21, SPOUT1, SPOUT2	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-T2-8	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-4.5		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b>  If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>  The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #28	<b>List all emission units associated with this control device.</b> MIN-U-SIL storage silos #6 & #7 (7e & E1), MIN-U-SIL Storage Silo #8 (63 & E1), SPOUT5	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-2D-F4	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 0.6-6.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #29	<b>List all emission units associated with this control device.</b> Minusil storage silo #5 (5e)	
<b>Manufacturer:</b> Micropul	<b>Model number:</b> CFH-18-20-VB	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 0.5-1.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #33	<b>List all emission units associated with this control device.</b> Supersil storage silos #1 - #4 (1e-4e)	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-T4-16	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 1.4-5.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #34	<b>List all emission units associated with this control device.</b> PACKR5 (1e & 2e), SPOUT3	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-2DF-4	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 0.5-5.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #36	<b>List all emission units associated with this control device.</b> SCREN 7-9 and 14-15 (1E)	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-T2-8	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 0.5-2.5		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #37	<b>List all emission units associated with this control device.</b> 5 Micron Feed Bin, ELEV17, and BIN5	
<b>Manufacturer:</b> Micropul	<b>Model number:</b> CFH-8-20	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 1.5-5.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #38	<b>List all emission units associated with this control device.</b> BIN4, BIN 4 SPOUT, and PACKR7	
<b>Manufacturer:</b> Micropul	<b>Model number:</b> CFH-18-20-VB	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 2.0-4.5		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b>  If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014).  If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b>  The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #39	<b>List all emission units associated with this control device.</b> ELEV14	
<b>Manufacturer:</b> Micropul	<b>Model number:</b> CFH 8-20-V	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 1.0-3.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
---

<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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## ATTACHMENT G - Air Pollution Control Device Form

<b>Control device ID number:</b> CF #40	<b>List all emission units associated with this control device.</b> PACKR1	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> Torit DF-T2-8	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
<input checked="" type="checkbox"/>	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 0.75-2.2		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Describe the parameters monitored and/or methods used to indicate performance of this control device.</b> The differential pressure gauges for the filters shall be operated continuously during operation of the emission units.
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<b>Control device ID number:</b> CF #41	<b>List all emission units associated with this control device.</b> BF1, Screen 21, ELEV22, ELEV24, AIRSD1, Airslide 100	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> DFT2-4-155	<b>Installation date:</b> Unknown

<b>Type of Air Pollution Control Device:</b>			
X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

<b>List the pollutants for which this device is intended to control and the capture and control efficiencies.</b>		
Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%
<b>Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).</b> Indicator Range for Pressure Drop (in H2O): 0.5-6.0		

<b>Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes</b> If Yes, <b>Complete ATTACHMENT H</b> CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014). If No, <b>Provide justification</b>
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<b>Control device ID number:</b> CF #42	<b>List all emission units associated with this control device.</b> #3 Microsizer, PNEU1	
<b>Manufacturer:</b> Donaldson	<b>Model number:</b> DFT2-4-155	<b>Installation date:</b> Unknown

**Type of Air Pollution Control Device:**

X	Baghouse/Fabric Filter	Venturi Scrubber	Single Cyclone
	Carbon Bed Adsorber	Packed Tower Scrubber	Cyclone Bank
	Carbon Drum(s)	Other Wet Scrubber	Settling Chamber
	Catalytic Incinerator	Condenser	Dry Plate Electrostatic Precipitator
	Thermal Incinerator	Flare	Other (describe
	Wet Plate Electrostatic Precipitator		

**List the pollutants for which this device is intended to control and the capture and control efficiencies.**

Pollutant	Capture Efficiency	Control Efficiency
TSP	99.99%	99.9%
PM10	99.99%	99.9%
PM2.5	99.99%	99.9%

**Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).**

Indicator Range for Pressure Drop (in H2O): 1.5-5.0

**Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes**

If Yes, **Complete ATTACHMENT H** CAM Plan was submitted with 2014 renewal application. The WVDEP approved and incorporated the applicable requirement into the Title V permit (R30-06500001-2014).

If No, **Provide justification**

## Attachment H

### Compliance Assurance Monitoring (CAM) Forms

All PSEUs and/or associated control devices were addressed in previous Title V renewal applications. No changes to the prior CAM forms and plan are necessary.



## ATTACHMENT H - Compliance Assurance Monitoring (CAM) Plan Form

For definitions and information about the CAM rule, please refer to 40 CFR Part 64. Additional information (including guidance documents) may also be found at <http://www.epa.gov/ttn/emc/cam.html>

### CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to **EACH** regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet **all** of the following criteria (*If No, then the remainder of this form need not be completed*):  YES  NO

- a. The PSEU is located at a major source that is required to obtain a Title V permit;
- b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is **NOT** exempt;

#### LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
  - Stratospheric Ozone Protection Requirements.
  - Acid Rain Program Requirements.
  - Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
  - An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).
- c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;
- d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; AND
- e. The PSEU is **NOT** an exempt backup utility power emissions unit that is municipally-owned.

### BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit:

**RENEWAL APPLICATION.** **ALL** PSEUs for which a CAM plan has **NOT** yet been approved need to be addressed in this CAM plan submittal.

**INITIAL APPLICATION** (submitted after 4/20/98). **ONLY** large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.

**SIGNIFICANT MODIFICATION TO LARGE PSEUs.** **ONLY** large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, **Only** address the appropriate monitoring requirements affected by the significant modification.

**3) <sup>a</sup> BACKGROUND DATA AND INFORMATION**

Complete the following table for **all** PSEUs that need to be addressed in this CAM plan submittal. This section is to be used to provide background data and information for each PSEU In order to supplement the submittal requirements specified in 40 CFR §64.4. If additional space is needed, attach and label accordingly.

PSEU DESIGNATION	DESCRIPTION	POLLUTANT	CONTROL DEVICE	<sup>b</sup> EMISSION LIMITATION or STANDARD	<sup>c</sup> MONITORING REQUIREMENT
CF #11	Mill Processing control device	Particulate matter, PM-10	Dry filter dust collector	Allowable PM Stack Emissions: 37 lb/hr [45CSR§7-4.1] [Stack 11]	Differential pressure gauges for the filters shall be operated continuously during operation of the emission units. [40 C.F.R. §64.3(a)(2); 45CSR§30-5.1.c.]  Visible emissions evaluations will be conducted as specified in facility-wide requirements R30-06500001-2014 (MM01 & MM02) sections 3.2.1. [45CSR§30-5.1c]
<u>EXAMPLE</u> Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c.; 9.0 lb/hr	Monitor pressure drop across multiclone: Weekly inspection of multiclone

<sup>a</sup> If a control device is common to more than one PSEU, one monitoring plan may be submitted for the control device with the affected PSEUs identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a). If a single PSEU is controlled by more than one control device similar in design and operation, one monitoring plan for the applicable control devices may be submitted with the applicable control devices identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a).

<sup>b</sup> Indicate the emission limitation or standard for any applicable requirement that constitutes an emission limitation, emission standard, or standard of performance (as defined in 40 CFR §64.1).

<sup>c</sup> Indicate the monitoring requirements for the PSEU that are required by an applicable regulation or permit condition.

**CAM MONITORING APPROACH CRITERIA**

Complete this section for EACH PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. If more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.

<b>4a) PSEU Designation:</b> CF #11	<b>4b) Pollutant:</b> PM-10	<b>4c) <sup>a</sup> Indicator No. 1:</b> Differential pressure	<b>4d) <sup>a</sup> Indicator No. 2:</b> Visible emissions
<b>5a) GENERAL CRITERIA</b> Describe the <u>MONITORING APPROACH</u> used to measure the indicators:		Differential pressure	Visible emissions using 40 CFR Part 60, Appendix A, Method 22
<sup>b</sup> Establish the appropriate <u>INDICATOR RANGE</u> or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:		0.5 to 6.0 (in wc)	No visible emissions for more than six minutes.
<b>5b) PERFORMANCE CRITERIA</b> Provide the <u>SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA</u> , such as detector location, installation specifications, and minimum acceptable accuracy:		Equipment: Differential pressure Gauge.  Monitoring location: Across inlet and outlet ducts.	In accordance with the monitoring requirements identified under Method 22.
<sup>c</sup> For new or modified monitoring equipment, provide <u>VERIFICATION PROCEDURES</u> , including manufacturer's recommendations, <u>TO CONFIRM THE OPERATIONAL STATUS</u> of the monitoring:		NA	NA
Provide <u>QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES</u> that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):		Calibrate, maintain, and operate instruments using procedures that take into account manufacturer's recommendations.	Calibrate, maintain, and operate instruments using procedures that take into account manufacturer's recommendations.
<sup>d</sup> Provide the <u>MONITORING FREQUENCY</u> :		Once per day	At least each calendar week during periods of normal facility operation
Provide the <u>DATA COLLECTION PROCEDURES</u> that will be used:		Operators log data manually	Observers complete opacity or VE observation forms and log into binder.
Provide the <u>DATA AVERAGING PERIOD</u> for the purpose of determining whether an excursion or exceedance has occurred:		Once per day	The duration of each EPA Method 22 test must be at least 15 minutes, and visible emissions will be considered to be present if they are detected for more than six minutes of the fifteen minute period.

<sup>a</sup> Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

<sup>b</sup> Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

<sup>c</sup> The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

<sup>d</sup> Emission units with post-control PTE ≥ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

**RATIONALE AND JUSTIFICATION**

Complete this section for EACH PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:  
CF #11

6b) Regulated Air Pollutant:  
PM-10

7) **INDICATORS AND THE MONITORING APPROACH:** Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer's recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

Pressure differential: Decreases in pressure differential would indicate increases in gas flow or poor distribution across the filter media; increases in pressure differential would indicate filter clogging or decreased gas flow from sources.

8) **INDICATOR RANGES:** Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how EACH indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.
- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.
- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

**RATIONALE AND JUSTIFICATION:**

Engineering judgment, historical plant records of pressure differential as a maintenance indicator, and manufacturer's specifications.

## Potential to Emit Calculations

**Input Data**

Company Name: U.S. Silica  
 Site Name: Berkeley Springs Plant  
 Project: Potential to Emit Calculations

**Input for Material Transfer, Screening, and Crushing Calculations**

Process	Activity	Throughput * (tons/hour)	Control Method	Title V ID
Primary Crushing	Truck Unloading - Fragmented Stone	1,000	None	VIBFD1
Primary Crushing	Primary Crushing (Jaw) - Dry	800	Fabric Filter - No Enclosure	CRUSH2
Primary Crushing	Conveyor Transfer - Dry	800	Fabric Filter	CONV3
Primary Crushing	Conveyor Transfer - Dry	800	Fabric Filter	CONV2
Primary Crushing	Conveyor Transfer - Dry	800	None	CONV1
Primary Crushing	Conveyor Transfer - Dry	800	Partial Enclosure (skirt)	Reclaim Stockpile
Secondary Crushing	Conveyor Transfer - Dry	400	Partial Enclosure (skirt)	VIBFD2
Secondary Crushing	Conveyor Transfer - Dry	400	Partial Enclosure	CONV4
Secondary Crushing	Conveyor Transfer - Dry	400	Full Enclosure (boot)	CONV5
Secondary Crushing	Secondary Crushing (All) - Dry	400	Wet Scrubber	CRUSH3
Secondary Crushing	Conveyor Transfer - Dry	400	Full Enclosure (boot)	CONV7
Secondary Crushing	Conveyor Transfer - Dry	400	Full Enclosure (boot)	CONV6
Storage Structures	Conveyor Transfer - Dry	400	Enclosed by Building	#1 Stone Tank
Secondary Crushing	Conveyor Transfer - Dry	400	Full Enclosure (boot)	CONV8
Storage Structures	Conveyor Transfer - Dry	400	Enclosed by Building	#2 Stone Tank
Wet Processing Plant	Conveyor Transfer - Dry	200	Full Enclosure (boot)	CONV12
Wet Processing Plant	Conveyor Transfer - Dry	200	Full Enclosure (boot)	CONV13
Wet Processing Plant	Conveyor Transfer - Dry	200	Full Enclosure (boot)	CONV14
Wet Processing Plant	Fines Crushing (All) - Wet Suppression	200	Full Enclosure (boot)	MILL1
Wet Processing Plant	Conveyor Transfer - Wet Suppression	150	Saturated Material (No Visible Emissions)	CONV15
Wet Processing Plant	Screening (All) - Wet Suppression	200	Full Enclosure (boot)	SCREN1
Wet Processing Plant	Screening (All) - Wet Suppression	200	Saturated Material (No Visible Emissions)	CLASS4&7
Wet Processing Plant	Screening (All) - Wet Suppression	200	Saturated Material (No Visible Emissions)	FERRO1
Wet Processing Plant	Screening (All) - Wet Suppression	160	Saturated Material (No Visible Emissions)	FCell
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	None	TANK2
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	Saturated Material (No Visible Emissions)	PIPE1
Wet Processing Plant	Screening (All) - Wet Suppression	200	Full Enclosure (boot)	WETSE1 - WETSE5
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	Full Enclosure (boot)	CONV17
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	Saturated Material (No Visible Emissions)	CONV18
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	Full Enclosure (boot)	CONV19
Miscellaneous	Conveyor Transfer - Wet Suppression	200	Enclosed by Building	Stockpile
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	Partial Enclosure (skirt)	CONV21
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	Partial Enclosure (skirt)	CONV23
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	Full Enclosure (boot)	CONV20 & CONV22
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	None	VIBFD4
Wet Processing Plant	Conveyor Transfer - Wet Suppression	200	Partial Enclosure (skirt)	CONV24
Wet Processing Plant	Conveyor Transfer - Dry	200	Wet Scrubber	DRYER #1 (3s)
Wet Processing Plant	Screening (All) - Dry	200	Fabric Filter	SCREN16
Wet Processing Plant	Conveyor Transfer - Dry	200	Fabric Filter	CONV25
Wet Processing Plant	Conveyor Transfer - Dry	50	Full Enclosure (boot)	CONV54
Wet Processing Plant	Fines Crushing (All) - Dry	50	Full Enclosure (boot)	MILL8
Wet Float Plant	Conveyor Transfer - Dry	25	Saturated Material (No Visible Emissions)	Slurry Pumps
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Saturated Material (No Visible Emissions)	CYCL04 & CYCL05
Wet Float Plant	Screening (All) - Wet Suppression	25	Saturated Material (No Visible Emissions)	FERRO2
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Saturated Material (No Visible Emissions)	CYCL03
Wet Float Plant	Screening (All) - Wet Suppression	25	Enclosed by Building	CLASS5
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Enclosed by Building	Conditioner
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Enclosed by Building	Floatation
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	None	Vacuum Table
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Enclosed by Building	SCREW21
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Enclosed by Building	CONV48
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Saturated Material (No Visible Emissions)	Drain Shed
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Enclosed by Building	CONV50
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Enclosed by Building	CONV49
Wet Float Plant	Conveyor Transfer - Dry	25	Wet Scrubber	DRYER #2 (8S)
Wet Float Plant	Conveyor Transfer - Dry	25	Enclosed by Building	SCREW22
Wet Float Plant	Conveyor Transfer - Dry	25	Fabric Filter	ELEV19
Wet Float Plant	Screening (All) - Dry	50	Fabric Filter	SCREN18 (1E)
Wet Float Plant	Conveyor Transfer - Dry	25	Fabric Filter	ELEV20
Wet Float Plant	Conveyor Transfer - Dry	25	Fabric Filter	ISTANK18
Wet Float Plant	Conveyor Transfer - Dry	25	Fabric Filter	Steel Storage Tank
Wet Float Plant	Conveyor Transfer - Dry	30	Fabric Filter	PACKR8 (1E)
Wet Float Plant	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	SPOUT4
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Saturated Material (No Visible Emissions)	CONV46
Wet Float Plant	Conveyor Transfer - Wet Suppression	25	Saturated Material (No Visible Emissions)	CONV47
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	200	Fabric Filter	CONV26
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	200	Fabric Filter	CONV27
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	200	Fabric Filter	ELEV4
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	200	Fabric Filter	VIBFD5
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	200	Fabric Filter	CONV39-41
Screening and Unground Sanding Processing	Screening (All) - Dry	375	Fabric Filter	SCREN7-9 & SCREN14-15 (1E)
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	30	Fabric Filter	CONV30
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	30	Fabric Filter	ELEV2

**Input Data**

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

Screening and Unground Sanding Processing	Conveyor Transfer - Dry	75	Fabric Filter	ELEV3
Screening and Unground Sanding Processing	Screening (All) - Dry	75	Fabric Filter	SCREN10-13 & SCREN2-4
Screening and Unground Sanding Processing	Screening (All) - Dry	50	Fabric Filter	SCREN17 (1E)
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	200	Fabric Filter	CONV33
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	200	None	CONV34
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	125	Fabric Filter	CONV29
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	75	Fabric Filter	ELEV1
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	75	Fabric Filter	CONV31
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	75	Fabric Filter	CONV32
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	Tanks #9 - #12
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	Tank #7 & #8
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	Tank #15 & #16
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	Tank #13 & #17
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	Tank #14 & #18
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	110	Full Enclosure (boot)	CONV36
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	110	Full Enclosure (boot)	CONV37
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	100	Fabric Filter - Partial Enclosure	Steel Tank #21
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Full Enclosure (boot)	QROK SPOUTS
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter	BE01 (E2)
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter	BE02 (E2)
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	LS01 (FE3)
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	36	Fabric Filter	PACKR1
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	200	Fabric Filter	CONV51
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	SPOUT1
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	SPOUT2
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	300	Full Enclosure (boot)	MOB-CONV
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	100	Full Enclosure (boot)	BE-03
Screening and Unground Sanding Processing	Conveyor Transfer - Dry	150	Full Enclosure (boot)	C Silo
Milling	Conveyor Transfer - Dry	150	Fabric Filter	Pulverizer Tank #19
Milling	Conveyor Transfer - Dry	100	Fabric Filter	#1 Mill Feed Bin
Milling	Conveyor Transfer - Dry	100	Fabric Filter	#2 Mill Feed Bin
Milling	Conveyor Transfer - Dry	15	Fabric Filter	FEEDB1
Milling	Conveyor Transfer - Dry	15	Fabric Filter	FEEDB2
Milling	Fines Crushing (All) - Dry	100	Full Enclosure (boot)	MILL2
Milling	Fines Crushing (All) - Dry	100	Full Enclosure (boot)	MILL3
Milling	Conveyor Transfer - Dry	100	Fabric Filter	SCREW6
Milling	Conveyor Transfer - Dry	100	Fabric Filter	AIRSD7
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV6
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV7
Milling	Conveyor Transfer - Dry	30	Fabric Filter	SCREW3
Milling	Conveyor Transfer - Dry	30	Fabric Filter	SCREW5
Milling	Conveyor Transfer - Dry	100	Fabric Filter	#3 Mill Feed Bin
Milling	Conveyor Transfer - Dry	100	Fabric Filter	#4 Mill Feed Bin
Milling	Conveyor Transfer - Dry	15	Fabric Filter	FEEDB3
Milling	Conveyor Transfer - Dry	15	Fabric Filter	FEEDB4
Milling	Fines Crushing (All) - Dry	100	Full Enclosure (boot)	MILL4
Milling	Fines Crushing (All) - Dry	100	Full Enclosure (boot)	MILL5
Milling	Conveyor Transfer - Dry	100	Fabric Filter	SCREW7
Milling	Conveyor Transfer - Dry	100	Fabric Filter	AIRSD8
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV8
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV9
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	SCREW16
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	SCREW17
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSE3
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSE4
Milling	Conveyor Transfer - Dry	30	Full Enclosure (boot)	SCREW4
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSE1
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSE2
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSD9
Milling	Conveyor Transfer - Dry	150	Fabric Filter	Pulverizer Tank # 20
Milling	Conveyor Transfer - Dry	100	Fabric Filter	#5 Mill Feed Bin
Milling	Conveyor Transfer - Dry	100	Fabric Filter	#6 Mill Feed Bin
Milling	Conveyor Transfer - Dry	15	Fabric Filter	FEEDB5
Milling	Conveyor Transfer - Dry	15	Fabric Filter	FEEDB6
Milling	Fines Crushing (All) - Dry	100	Fabric Filter	MILL6
Milling	Fines Crushing (All) - Dry	100	Full Enclosure (boot)	MILL7
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSD2
Milling	Conveyor Transfer - Dry	100	Fabric Filter	AIRSD3
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV10
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV11
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSE5
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSE6
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	SCREW18
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	SCREW19
Milling	Conveyor Transfer - Dry	100	Fabric Filter	AIRSD1
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV 22
Milling	Conveyor Transfer - Dry	8	Fabric Filter	Airslide 100
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV24
Milling	Fines Screening (All) - Dry	25	Fabric Filter	Screen21
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	AIRSD1-GENERIC
Milling	Conveyor Transfer - Dry	100	Fabric Filter	ELEV15
Milling	Conveyor Transfer - Dry	100	Full Enclosure (boot)	BIN2
Milling	Conveyor Transfer - Dry	20	Fabric Filter	BF1
Milling	Screening (All) - Dry	25	Fabric Filter	Microsizer #3
Milling	Conveyor Transfer - Dry	15	Fabric Filter	PNEU1
Milling	Fines Screening (All) - Dry	85	Fabric Filter	AIRSD12
Milling	Fines Screening (All) - Dry	85	Fabric Filter	AIRSD13
Milling	Conveyor Transfer - Dry	130	Fabric Filter	Tailing Bins
Milling	Conveyor Transfer - Dry	15	Fabric Filter	PNEU2
Milling	Conveyor Transfer - Dry	15	Fabric Filter	PNEU4
Milling	Conveyor Transfer - Dry	15	Fabric Filter	#1 & #2 Pumps
Milling	Conveyor Transfer - Dry	15	Fabric Filter	BIN7
Micron Production	Conveyor Transfer - Dry	10	Fabric Filter	BIN4

**Input Data**

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

Micron Production	Conveyor Transfer - Dry	150	Fabric Filter	5 Micron Feed Bin
Micron Production	Fines Screening (All) - Dry	20	Full Enclosure (boot)	AIRSEB-16, 18 &19
Micron Production	Conveyor Transfer - Dry	150	Fabric Filter	ELEV17
Micron Production	Conveyor Transfer - Dry	150	Fabric Filter	ELEV16
Micron Production	Conveyor Transfer - Dry	10	Fabric Filter	BIN5
Storage Structures	Conveyor Transfer - Dry	10	Fabric Filter - Partial Enclosure	BIN4 SPOUT
Micron Production	Conveyor Transfer - Dry	15	Fabric Filter	PACKR7
Milling	Conveyor Transfer - Dry	150	Fabric Filter	ELEV14
Storage Structures	Conveyor Transfer - Dry	125	Fabric Filter	Supersil Storage Silos #1 - #4 (1e-4e)
Storage Structures	Conveyor Transfer - Dry	100	Fabric Filter	MIN-U-SIL storage silo #8 (6e & F1)
Storage Structures	Conveyor Transfer - Dry	125	Fabric Filter	MIN-U-SIL storage silo #5 (5e)
Storage Structures	Conveyor Transfer - Dry	100	Fabric Filter	MIN-U-SIL storage silos #6 & #7 (6e & F1)
Micron Production	Conveyor Transfer - Dry	20	Fabric Filter	PACKR3
Micron Production	Conveyor Transfer - Dry	20	Fabric Filter	PACKR4
Storage Structures	Conveyor Transfer - Dry	200	Fabric Filter - Partial Enclosure	SPOUT3
Micron Production	Conveyor Transfer - Dry	15	Fabric Filter	PACKR5 (1e & 2e)
Storage Structures	Conveyor Transfer - Dry	150	Fabric Filter - Partial Enclosure	SPOUT5
Micron Production	Conveyor Transfer - Dry	100	Fabric Filter	ELEV23
Storage Structures	Conveyor Transfer - Dry	800	Fabric Filter	CGS Tank
Storage Structures	Conveyor Transfer - Dry	250	Fabric Filter	PEMCOtank
Storage Structures	Conveyor Transfer - Dry	250	Fabric Filter - Partial Enclosure	SPOUT6
Miscellaneous	Drilling	1,000	None	
Miscellaneous	Truck Loading - Crushed Stone	1,000	None	

A. Throughputs based on TVOP Application Forms  
 B. Control methods and release points from Title V permit and Process Flow Diagram provided by US Silica.

**Input for Limestone System**

Process	Process Unit Description	Throughput <sup>A</sup> (tons/year)
Limestone	1 - Crushing	4,380,000
Limestone	2 - Screening	4,380,000
Limestone	3 - Transfer Points	4,380,000
Limestone	4 - Stockpiles	4,380,000
Limestone	5 - Unpaved Haul Roads	

**Input for Baghouse Calculations**

Process Unit Description	Flowrate <sup>A</sup> (dscfm)	Outlet Grain Loading <sup>B</sup> (gr/dscft)	Annual Hours of Operation <sup>C</sup> (hrs/year)	MMDSF per Year
Fluid Bed Dryer & Rotary Dryer			8,760	
Screening and Unground Sanding Processing CF#40	5,500	0.014	8,760	2891
Screening and Unground Sanding Processing CF#6	20,000	0.014	8,760	10512

Fluid Bed Dryer  
 Dust Collector #40  
 Dust Collector #6

A. Flowrates based on make and model specifications.  
 B. Outlet grain loading from TVOP Outlet Grain Loading Limits  
 C. Annual hours of operation are assumed to be 8,760 hr/yr.

**Input for Unpaved Road Emission Calculations**

Vehicle Type	Product Handled	Weight Empty <sup>A</sup> (tons)	Weight Full <sup>B</sup> (tons)
Haul Trucks/Trucks	Quarried material	68	158

A. Truck weight when empty from specification sheet for Euclid R858 haul truck  
 B. Truck weight when loaded from specification sheet for Euclid R858 haul truck

Title V ID	Source Description	Trip Description	Vehicle Type	Product Handled	Annual Throughput <sup>A</sup> (tons/year)	Roundtrip Length <sup>B</sup> (miles/trip)
Roads	Facility Roadways	Unpaved Haul Roads	Haul Trucks/Trucks	Quarried material	8,760,000	2.00
Roads	Facility Roadways	Unpaved Plant Traffic	Haul Trucks/Trucks	Quarried material	8,760,000	1.00
Roads	Facility Roadways - Limestone	Unpaved Plant Traffic	Haul Trucks/Trucks	Quarried material	4,380,000	0.40

A. Annual throughput based on maximum quarry throughput.  
 B. Average round trip length estimate provided by U.S. Silica. Assumed 2 miles of total trip on haul roads and 1 mile of total trip on unpaved plant roads.

**Input for Combustion Emission Calculations**

Title V ID	Source Description	Process Unit Description	Fuel Type <sup>A</sup>	Fuel Heating Value (MMBtu/MMSCF or MMBtu/1,000 gal)	Propane Throughput <sup>C</sup> (1,000 gallons/yr)	Natural Gas Throughput <sup>C</sup> (MMSCF/yr)	Fuel Oil Throughput <sup>C</sup> (1,000 gal/yr)
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	150.00			4,146.40
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	150.00			4,146.40
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	91.50			6,797.38
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	140.00			4,442.57
Dryer #1	Wet Processing Plant	Fluid Bed Dryer- Natural Gas Combustion	Natural Gas	1,020.00		609.76	
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	91.50	1,637.11		

A. Fuel types provided by U.S. Silica  
 B. Higher heating values based on AP-42 conversion factors where not specified in permit.  
 C. Annual consumption of each fuel type assumed to be max fuel consumption operating at 8760 hr/yr.

Fuel Type	Sulfur Content in Fuel (%)	Reference	Ash Content in Fuel (%)	Reference	Density (lb/gal)
Recycled Oil	1.5	TVOP Limit	0	U.S. Silica Records	7.351
No. 2 Fuel Oil	0.2	TVOP Limit	0	Replace with site data when available.	-
No. 6 Fuel Oil	1.5	TVOP Limit	0	Replace with site data when available.	-

A. Fuel ash content based on U.S. Silica records and a 20% compliance margin.

**Input for Permitted Limit Emission Calculations**

Title V ID	Emission Factor <sup>A,B</sup>			Input Data	
	Value	Units	Pollutant	Value	Units
Material Transfer/Conveying	1	lb/hr	PM	8,760	hrs/year
Material Transfer/Conveying	1	lb/hr	PM10	8,760	hrs/year
Material Transfer/Conveying	0.8	lb/hr	PM2.5	8,760	hrs/year
Screening	0.685	lb/hr	PM	8,760	hrs/year
Screening	0.685	lb/hr	PM10	8,760	hrs/year
Screening	0.548	lb/hr	PM2.5	8,760	hrs/year
Bulk Load and BFS Bagger	0.685	lb/hr	PM	8,760	hrs/year
Bulk Load and BFS Bagger	0.685	lb/hr	PM10	8,760	hrs/year
Bulk Load and BFS Bagger	0.548	lb/hr	PM2.5	8,760	hrs/year
Bulk Bagger	0.1	lb/hr	PM	8,760	hrs/year
Bulk Bagger	0.1	lb/hr	PM10	8,760	hrs/year
Bulk Bagger	0.08	lb/hr	PM2.5	8,760	hrs/year
#6 Silo	0.05	lb/hr	PM	8,760	hrs/year
#6 Silo	0.05	lb/hr	PM10	8,760	hrs/year
#6 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year
#7/#8 Silo	0.70	lb/hr	PM	8,760	hrs/year
#7/#8 Silo	0.70	lb/hr	PM10	8,760	hrs/year
#7/#8 Silo	0.56	lb/hr	PM2.5	8,760	hrs/year
#5 Silo	0.05	lb/hr	PM	8,760	hrs/year
#5 Silo	0.05	lb/hr	PM10	8,760	hrs/year



**Input Data**

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

#5 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year
#4 Silo	0.05	lb/hr	PM	8,760	hrs/year
#4 Silo	0.05	lb/hr	PM10	8,760	hrs/year
#4 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year
#3 Silo	0.05	lb/hr	PM	8,760	hrs/year
#3 Silo	0.05	lb/hr	PM10	8,760	hrs/year
#3 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year
#2 Silo	0.05	lb/hr	PM	8,760	hrs/year
#2 Silo	0.05	lb/hr	PM10	8,760	hrs/year
#2 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year
#1 Silo	0.05	lb/hr	PM	8,760	hrs/year
#1 Silo	0.05	lb/hr	PM10	8,760	hrs/year
#1 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year

A. Emission factors from Title V permit.  
 B. Assume PM<sub>10</sub> emissions = PM emissions. PM<sub>2.5</sub> emission factors assumed to be 80% of PM<sub>10</sub> emission factors.

**Input for Stockpile Emission Calculations**

Title V ID	Stockpile Area <sup>A</sup> (acres)	Number of Active Days per Year <sup>B</sup> (days/year)	Control Method
Golf Sand Stockpile & Float Sand Stockpile	5.63	365	None
Reclaim Stockpile	1,386	365	Partial Enclosure (skirt)

A. Assumed same stockpile area that was reported for Reporting Year 2016. Reclaim stockpile area estimated from Google Earth.  
 B. Active stockpiles are those piles that have at least 8 hours of activity per 24 hours.

**Input for Blasting Emission Calculations**

Title V ID	Amount of Material Removed per Blast <sup>A</sup> (tons)	Total Amount Removed <sup>B</sup> (tons)	Control Method	Horizontal Area Removed per Blast <sup>A</sup> (ft <sup>2</sup> )	Number of Blasts per Year <sup>C</sup>
Quarry	171,765	8,760,000	None	5978.82	51

A. Horizontal area removed per blast from U.S. Silica data  
 B. Total amount of material removed assumed to be maximum potential material processed downstream.  
 C. Number of blasts per year from 2022 Blast Records and 20% compliance margin.

**Input for Tank Emission Calculations**

Process	Capacity (gallons)	Material	Title V ID
Diesel Fuel Tank	10,000	Diesel	Tank No. 1
Used Oil Tank at Maintenance garage	275	Used Oil	Tank No. 2
Used Oil Tank at Maintenance garage	275	Used Oil	Tank No. 3
#1 Oil Tank at Maintenance garage	275	Oil	Tank No. 4
#2 Oil Tank at Maintenance garage	275	Oil	Tank No. 5
#3 Oil Tank at Maintenance garage	275	Oil	Tank No. 6
#4 Oil Tank at Maintenance garage	275	Oil	Tank No. 7
Recycled Oil Tank near Float Plant	10,000	Recycled Oil	Tank No. 8
Kerosene Tank at C & R Shop	275	Kerosene	Tank No. 11
Gasoline Tank at Office Building	1,000	Gasoline	Tank No. 12
Lube Oil Tank at Secondary Crusher	300	Lube Oil	Tank No. 13
Recycled Oil	30,000	Recycled Oil	Tank No. 16
Recycled Oil	30,000	Recycled Oil	Tank No. 17
Petroleum Sulfonate (Conditioner) Tank at Float Plant	275	Conditioner	Tank No. 24
Two Propane Tanks at the electric shop 30,000 gallon each	60,000	Propane	Tank No. 25
Propane Tank at the Quarry	2,000	Propane	Tank No. 26
Propane Tank at #6 Oil Building	1,000	Propane	Tank No. 27
Two Propane Tanks at the C&R Shop	1,000	Propane	Tank No. 28
Sodium Hydroxide Tank	8,200	Sodium Hydroxide	Tank No. 29
Sulfuric Acid Tank	6,000	Sulfuric Acid	Tank No. 30
Floculent Tank	550	Floculent	Tank No. 31
Anti-foam Tank	2,500	Anti-foam	Tank No. 32
Promoter Tank	12,000	Promoter	Tank No. 33

## Emission Factors for Material Transfer, Screening, and Crushing

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Emission Sources	Emission Factors					
	PM (lb/ton)	Reference	PM <sub>10</sub> (lb/ton)	Reference	PM <sub>2.5</sub> (lb/ton)	Reference
Primary Crushing (Jaw) - Dry	0.0007	B	0.00033	B	0.00005	D
Primary Crushing (Jaw) - Wet Suppression	0.00021	B	0.0001	B	0.00002	D
Secondary Crushing (All) - Dry	0.00504	B	0.0024	B	0.00036	D
Secondary Crushing (All) - Wet Suppression	0.0012	B	0.00054	B	0.00008	D
Tertiary Crushing (All) - Dry	0.0054	A	0.0024	A	0.00036	D
Tertiary Crushing (All) - Wet Suppression	0.0012	A	0.00054	A	0.0001	A
Fines Crushing (All) - Dry	0.039	A	0.015	A	0.002271	D
Fines Crushing (All) - Wet Suppression	0.003	A	0.0012	A	0.00007	A
Screening (All) - Dry	0.025	A	0.0087	A	0.0013	D
Screening (All) - Wet Suppression	0.0022	A	0.00074	A	0.00005	A
Fines Screening (All) - Dry	0.3	A	0.072	A	0.011	D
Fines Screening (All) - Wet Suppression	0.0036	A	0.0022	A	0.00033	D
Conveyor Transfer - Dry	0.003	A	0.0011	A	0.00017	D
Conveyor Transfer - Wet Suppression	0.00014	A	0.000046	A	0.000013	A
Truck Unloading - Fragmented Stone	0.000034	B	0.000016	A	0.000002	D
Truck Loading - Crushed Stone	0.00021	B	0.0001	A	0.00002	D
Drilling	0.001	E	0.0008	E	0.00080	E
Clay Grinding and Screening (All) - Dry	8.5	C	0.53	C	0.080	D
Clay Grinding and Screening (All) - Wet Suppression	0.025	C	0.0023	C	0.00035	D

A. U.S. EPA, AP-42 Section 11.19.2 - Crushed Stone Processing and Pulverized Mineral Processing (August 2004), Table 11.19.2-2. Per footnote b, controlled sources (with wet suppression) are those that are part of the processing plant that employs current wet suppression technology similar to the study group. The moisture content of the study group without wet suppression systems operating (uncontrolled) ranged from 0.21 to 1.3 percent, and the same facilities operating wet suppression systems (controlled) ranged from 0.55 to 2.88 percent. Due to carry over of the small amount of moisture required, it has been shown that each source, with the exception of crushers, does not need to employ direct water sprays.

B. TCEQ Air Permits Division, Rock Crusher Emission Calculations spreadsheet, [https://www.tceq.texas.gov/permitting/air/guidance/newsource/rocks/nsr\\_fac\\_rock.html](https://www.tceq.texas.gov/permitting/air/guidance/newsource/rocks/nsr_fac_rock.html), Downloaded on January 5, 2015.

C. U.S. EPA, AP-42 Section 11.3 - Brick and Structural Clay Product Manufacturing (August 1997), Table 11.3-2.

D. PM<sub>2.5</sub> emission factor is calculated by dividing the PM<sub>10</sub> emission factor by the ratio of PM<sub>10</sub> to PM<sub>2.5</sub> particle size multipliers (k). The Particle size multipliers are from U.S. EPA, AP-42 Section 13.2.4 - Aggregate Handling and Storage Piles (November 2006), table following Equation 1.

k for PM <sub>10</sub>	0.35
k for PM <sub>2.5</sub>	0.053
Ratio of PM <sub>10</sub> to PM <sub>2.5</sub>	6.6

E. Mojave Desert Air Quality Management District (AQMD) Emissions Inventory Guidance, Mineral Handling and Processing Industries. April 10, 2000

## Emission Factors for Combustion

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Pollutants	Emission Factors (lb/1,000 gallon)		Emission Factors (lb/1,000 gallon)						Emission Factors (lb/10 <sup>6</sup> scf)	
	Propane	Reference	No. 2 Fuel Oil	Reference	No. 6 Fuel Oil	Reference	Recycled Oil	Reference	Natural Gas	Reference
NO <sub>x</sub>	19	I	20	I	55	I	19	I	100	J
CO	3.2	I	5	I	5	I	5	I	84	J
SO <sub>2</sub>	0.054	A, G	28.4	C	235.5	C	221	F	0.6	J
PM (con)	0.5	A	1.3	C	1.5	C	1.5	C	5.7	J
PM (filt)	0.2	A	2	C	17.005	C	0	F	1.9	J
PM <sub>10</sub> (filt)	0.2	A	1	C	14.70	C	0	F	1.9	J
PM <sub>2.5</sub> (filt)	0.2	A	0.25	C	9.57	C	0	F	1.9	J
CO <sub>2</sub>	12586.574	H	22454.256	H	24783.00	H	23117.6	H	120018.54	H
CH <sub>4</sub>	0.6006	H	0.9108	H	0.99	H	0.9372	H	2.26	H
N <sub>2</sub> O	0.12012	H	0.18216	H	0.198	H	0.18744	H	0.23	H
VOC	0.3	I	0.2	I	0.28	I	0.22	I	5.5	J
NH <sub>3</sub>	0.29	B	0.8	D	0.8	E	0.8	E	0.49	B
Lead	0	--	0.00126	C	0.0015	C	0.1015	F	0.0005	J

A. U.S. EPA, AP-42 Section 1.5 - Liquefied Petroleum Gas Combustion (July 2008), Table 1.5-1.

B. U.S. EPA, Factor Information Retrieval Data System (FIRE), <http://cfpub.epa.gov/webfire/index.cfm?action=fire.report>, Downloaded on January 9, 2015, SCC 10200602, uncontrolled. Assuming emission factor from Propane same as emission factor for Natural Gas.

C. U.S. EPA, AP-42 Section 1.3 - Fuel Oil Combustion (May 2010), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-5, 1.3-6, 1.3-10 and 1.3-11. Some SO<sub>2</sub> and particulate emission factors are calculated by multiplying emission factor by the sulfur and/or ash content in fuel. PM(con) emission factor for Recycled Oil is assumed to be the same as that for No. 6 Fuel Oil. Sample calculations are included below for representative factors that were calculated. Emission factors are assumed to be the same for distillates, No. 2 Fuel Oil, and diesel.

$$\text{Recycled Oil SO}_2 \text{ Factor (lb/1,000 gallon)} = \frac{147 \text{ lb}}{1,000 \text{ gallon}} \times 1.5 \% \text{ Sulfur} = 220.50 \text{ lb SO}_2 / 1,000 \text{ gallon}$$

D. U.S. EPA, Factor Information Retrieval Data System (FIRE), <http://cfpub.epa.gov/webfire/index.cfm?action=fire.report>, Downloaded on January 9, 2015, SCC 10200501, uncontrolled. Emission factors are assumed to be the same for distillates, No. 2 Fuel Oil, and diesel.

E. U.S. EPA, Factor Information Retrieval Data System (FIRE), <http://cfpub.epa.gov/webfire/index.cfm?action=fire.report>, Downloaded on January 9, 2015, SCC 10200401. Assuming emission factor for Recycled Oil to be same as No. 6 Fuel Oil.

F. U.S. EPA, AP-42 Section 1.11 - Waste Oil Combustion (October 1996), Tables 1.11-1, 1.11-2, and 1.11-3. Assumed lead content of fuel = 18.45 ppm from maximum measure lead content from provided fuel delivery chemical analyses.

G. Sulfur content estimate for propane from A National Methodology and Emission Inventory for Residential Fuel Consumption, <http://www.epa.gov/ttnchie1/conference/ei12/area/haneke.pdf>

H. 40 CFR Part 98, Subpart C, Tables C-1 and C-2. Heating value for recycled oil taken from US Silica records. Heating values for other fuels from default values in Table C-1.

I. Facility's Title V permit, Condition 4.4.2.

J. U.S. EPA, AP-42 Section 1.4 - Natural Gas Combustion (July 1998), Table 1.4-1 and 2.

### Emission Factors for Combustion

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

Pollutants	Natural Gas (lb/MMSCF)	Emission Factors (lb/1,000 gallon)		Emission Factors (lb/1,000 gallon)						Emission Factors (lb/10 <sup>6</sup> scf)	
		Propane	Reference	No. 2 Fuel Oil	Reference	No. 6 Fuel Oil	Reference	Recycled Oil	Reference	Natural Gas	Reference
Antimony	-	-	-	-	-	5.25E-03	B	4.50E-03	C	-	-
Arsenic	2.00E-04	1.78E-05	A	5.52E-04	B	1.32E-03	B	7.35E-03	D	2.00E-04	E
Beryllium	1.20E-05	1.07E-06	A	4.14E-04	B	2.78E-05	B	1.80E-03	C	1.20E-05	E
Cadmium	1.10E-03	9.81E-05	A	4.14E-04	B	3.98E-04	B	8.82E-03	D	1.10E-03	E
Chloride	-	-	-	-	-	3.47E-01	B	3.47E-01	B	-	-
Chromium	1.40E-03	1.25E-04	A	4.14E-04	B	8.45E-04	B	1.84E-02	D	1.40E-03	E
Cobalt	8.40E-05	7.49E-06	A	-	-	6.02E-03	B	5.70E-03	C	8.40E-05	E
Manganese	3.80E-04	3.39E-05	A	8.28E-04	B	3.00E-03	B	6.80E-02	C	3.80E-04	E
Mercury	2.60E-04	2.32E-05	-	4.14E-04	B	1.13E-04	B	-	-	2.60E-04	E
Nickel	2.10E-03	1.87E-04	A	4.14E-04	B	8.45E-02	B	1.60E-01	C	2.10E-03	E
Selenium	2.40E-05	2.14E-06	A	2.07E-03	B	6.83E-04	B	-	-	2.40E-05	E
Phosphorus	-	-	-	-	-	9.46E-03	B	3.60E-02	C	-	-
PCBs	-	-	-	-	-	-	-	7.35E-03	D	-	-
Phenol	-	-	-	-	-	-	-	2.40E-03	C	0.00E+00	-
Dichlorobenzene	1.20E-03	1.07E-04	A	-	-	-	-	8.00E-07	C	1.20E-03	-
Naphthalene	6.10E-04	5.44E-05	A	1.13E-03	B	1.13E-03	B	1.30E-02	C	6.10E-04	E
Phenanthrene	1.70E-05	1.52E-06	A	1.05E-05	B	1.05E-05	B	1.10E-02	C	1.70E-05	E
Dibutylphthalate	-	-	-	-	-	-	-	3.40E-05	C	-	-
Butylbenzylphthalate	-	-	-	-	-	-	-	5.10E-04	C	-	-
Bis(2-ethylhexyl)phthalate	-	-	-	-	-	-	-	2.20E-03	C	-	-
Pyrene	5.00E-06	4.46E-07	A	4.25E-06	B	4.25E-06	B	7.10E-03	C	5.00E-06	E
Benz(a)anthracene	1.80E-06	1.61E-07	A	4.01E-06	B	4.01E-06	B	4.00E-03	C	1.80E-06	E
Benzo(a)pyrene	1.20E-06	1.07E-07	A	-	-	-	-	4.00E-03	C	1.20E-06	E
Formaldehyde	7.50E-02	6.69E-03	A	6.10E-02	B	6.10E-02	B	-	-	7.50E-02	E
POM	-	-	-	3.30E-03	B	1.30E-03	B	-	-	-	-
Benzene	2.10E-03	1.87E-04	A	2.14E-04	B	2.14E-04	B	-	-	2.10E-03	E
Ethylbenzene	-	-	-	6.36E-05	B	6.36E-05	B	-	-	-	-
1,1,1-Trichloroethane	-	-	-	2.36E-04	B	2.36E-04	B	-	-	-	-
Toluene	3.40E-03	3.03E-04	A	6.20E-03	B	6.20E-03	B	-	-	3.40E-03	E
o-Xylene	-	-	-	1.09E-04	B	1.09E-04	B	-	-	-	-
Acenaphthene	1.80E-06	1.61E-07	A	2.11E-05	B	2.11E-05	B	-	-	1.80E-06	E
Acenaphthylene	1.80E-06	1.61E-07	A	2.53E-07	B	2.53E-07	B	-	-	1.80E-06	E
Anthracene	2.40E-06	2.14E-07	A	1.22E-06	B	1.22E-06	B	-	-	2.40E-06	E
Benzo(b,k)fluoranthene	-	-	-	1.48E-06	B	1.48E-06	B	-	-	-	-
Benzo(b)fluoranthene	1.80E-06	1.61E-07	A	-	-	-	-	-	-	1.80E-06	E
Benzo(k)fluoranthene	1.80E-06	1.61E-07	A	-	-	-	-	-	-	1.80E-06	E
Benzo(g,h,i)perylene	1.20E-06	1.07E-07	A	2.26E-06	B	2.26E-06	B	-	-	1.20E-06	E
Chrysene	1.80E-06	1.61E-07	A	2.38E-06	B	2.38E-06	B	-	-	1.80E-06	E
Dibenzo(a,h)anthracene	1.20E-06	1.07E-07	A	1.67E-06	B	1.67E-06	B	-	-	1.20E-06	E
Fluoranthene	3.00E-06	2.68E-07	A	4.84E-06	B	4.84E-06	B	-	-	3.00E-06	E
Fluorene	2.80E-06	2.50E-07	A	4.47E-06	B	4.47E-06	B	-	-	2.80E-06	E
Indeno(1,2,3-cd)pyrene	1.80E-06	1.61E-07	A	2.14E-06	B	2.14E-06	B	-	-	1.80E-06	E
Hexane	1.8	1.61E-01	A	-	-	-	-	-	-	1.80E+00	E
2-Methylnaphthalene <sup>B</sup>	2.40E-05	2.14E-06	A	-	-	-	-	-	-	2.40E-05	E
3-Methylchloranthrene <sup>B</sup>	1.80E-06	1.61E-07	A	-	-	-	-	-	-	1.80E-06	E
12- Dimethylbenz(a)anthracen	1.60E-05	1.43E-06	A	-	-	-	-	-	-	1.60E-05	E

A. U.S. EPA, AP-42 Section 1.4 - Natural Gas Combustion (July 1998), Tables 1.4-3 and 1.4-4. Propane emission factors determined by converting natural gas emission factors from a lb/MMSCF natural gas to a lb/1,000 gal propane basis.

B. U.S. EPA, AP-42 Section 1.3 - Fuel Oil Combustion (May 2010), Tables 1.3-8, 1.3-9, 1.3-10 and 1.3-11. Sample calculations are included below for representative factors that were calculated. Emission factors are assumed to be the same for distillates, No. 2 Fuel Oil, and diesel. When emission factors for No. 2 fuel oil were not available, assumed equal to emission factors for Residual Oil.

C. U.S. EPA, AP-42 Section 1.11 - Waste Oil Combustion (October 1996), Tables 1.11-4 and 1.11-5. Emission factors for Residual Fuel oil used in cases where emission factors for Waste Oil were not available.

D. Maximum value of pollutant concentration from monthly fuel delivery chemical analysis of Recycled Oil. Estimated emission factor based on conservative assumption that all of the pollutant in the fuel is emitted.

E. U.S. EPA, AP-42 Section 1.4 - Natural Gas Combustion (July 1998), Table 1.4-3 and 4.

## Control Factors

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Control Method <sup>A, B, C, D</sup>	Control Efficiency (%)	Control Factor (1 - Control Efficiency)
None	0%	1
Partial Enclosure (skirt)	85%	0.15
Full Enclosure (boot)	90%	0.1
Enclosed by Building	90%	0.1
Wet Material	50%	0.5
Water Spray	70%	0.3
Chemicals/Foam	80%	0.2
Washed Sand/Gravel	95%	0.05
Washed Sand/Gravel With Water Spray	98.5%	0.015
Saturated Material (No Visible Emissions)	99%	0.01
Fabric Filter - Partial Enclosure	89.9%	0.1009
Fabric Filter - No Enclosure	74.9%	0.25075
Wet Scrubber	80%	0.2
Fabric Filter	99.9%	0.001

A. Control efficiency for all control methods except saturated material and fabric filters from TCEQ Air Permits Division, Rock Crusher Emission Calculations spreadsheet, [https://www.tceq.texas.gov/permitting/air/guidance/newsourcereview/rocks/nsr\\_fac\\_rock.html](https://www.tceq.texas.gov/permitting/air/guidance/newsourcereview/rocks/nsr_fac_rock.html), Downloaded on January 5, 2015.

- Wet control methods (i.e., water, chemicals, saturated material, etc.) are to be applied to dry control factors.

B. Control efficiency for saturated material from TCEQ Air Permits Division, Rock Crushing Plants, Draft RG 058 (February 2002), Table 7, in a note that states "A 99% control efficiency may be allowed when a facility (emission point) operates under saturated conditions with no visible emissions."

C. Control efficiency for fabric filters from typical expected efficiency.

D. Efficiencies for fabric filter controls with partial enclosures and no enclosures and wet scrubber from engineering estimates of expected capture efficiencies.

## Emission Factors for Tanks

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Pollutants	Emission Factors (lb/gallon)
	Tank
Benzene	8.47E-07
Ethylbenzene	1.21E-06
n-Hexane	1.73E-07
Toluene	9.56E-06
VOC	3.03E-05

A. Based on TankESP run assuming generic tank attributes.

**Material Transfer, Screening, and Crushing Emissions**

Company Name: U.S. Silica  
 Site Name: Berkeley Springs Plant  
 Project: Potential to Emit Calculations  
 Annual Hours of Operation: 8760

Title / ID	Source Description	Activity	Control Method	Control Factor <sup>A</sup>	Potential (tons/year)	Emission Factor <sup>B</sup> (lb./ton)	PM <sub>10</sub>	PM <sub>2.5</sub>	TSP	Emission Rate <sup>C</sup> (tph)	Process Unit	Total Process Unit Emission Factors			Total Process Unit Emissions			
												PM <sub>10</sub>	PM <sub>2.5</sub>	TSP	PM <sub>10</sub>	PM <sub>2.5</sub>	TSP	
VBFD1	Primary Crushing	Truck Unloading - Fragmented Stone	None	0.25075	87,500.00	0.0003	0.0002	0.0002	0.1489	0.0701	0.1016	0.00004	0.00016	0.00020	0.14892	0.07008	0.10162	
CHUSH2	Primary Crushing	Primary Crushing (Jaw) - Dry	Fabric Filter - No Enclosure	0.25075	7,068.000	0.0030	0.0033	0.0030	0.6150	0.2899	0.6150	0.493	0.00070	0.00030	0.00050	0.61504	0.28994	0.61504
CONV1	Primary Crushing	Conveyor Transfer - Dry	Fabric Filter	0.001	7,068.000	0.0030	0.0033	0.0030	0.6150	0.2899	0.6150	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CONV2	Primary Crushing	Conveyor Transfer - Dry	Fabric Filter	0.001	7,068.000	0.0030	0.0033	0.0030	0.6150	0.2899	0.6150	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
CONV3	Primary Crushing	Conveyor Transfer - Dry	Fabric Filter	0.001	7,068.000	0.0030	0.0033	0.0030	0.6150	0.2899	0.6150	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
BEACH STOCKPILE	Primary Crushing	Conveyor Transfer - Dry	Partial Enclosure (skin)	0.15	7,068.000	0.0030	0.0033	0.0030	10,120.00	3,854.00	5,837.00	0.00000	0.00000	0.00000	10,120.000	3,854.000	5,837.000	
VBFD2	Secondary Crushing	Conveyor Transfer - Dry	Partial Enclosure (skin)	0.15	3,504.000	0.0030	0.0033	0.0030	4,788.00	1,788.00	2,891.00	0.00000	0.00000	0.00000	4,788.000	1,788.000	2,891.000	
CONV4	Secondary Crushing	Conveyor Transfer - Dry	Partial Enclosure (skin)	0.15	3,504.000	0.0030	0.0033	0.0030	4,788.00	1,788.00	2,891.00	0.00000	0.00000	0.00000	4,788.000	1,788.000	2,891.000	
CONV2	Secondary Crushing	Conveyor Transfer - Dry	Full Enclosure (boot)	0.1	3,504.000	0.0030	0.0033	0.0030	0.2566	0.1927	0.292	0.00000	0.00000	0.00000	0.25660	0.19270	0.29200	
CRUSH3	Secondary Crushing	Secondary Crushing (All) - Dry	Wet Scrubber	0.2	3,504.000	0.0050	0.0040	0.0033	1,756.00	0.810	1.273	0.800	0.00500	0.00400	0.00363	1,756016	0.810400	1.273450
CONV7	Secondary Crushing	Conveyor Transfer - Dry	Full Enclosure (boot)	0.1	3,504.000	0.0030	0.0033	0.0030	0.2566	0.1927	0.292	0.00000	0.00000	0.00000	0.25660	0.19270	0.29200	
CONV2	Secondary Crushing	Conveyor Transfer - Dry	Full Enclosure (boot)	0.1	3,504.000	0.0030	0.0033	0.0030	0.2566	0.1927	0.292	0.00000	0.00000	0.00000	0.25660	0.19270	0.29200	
#1 Stone Tank	Storage Structures	Conveyor Transfer - Dry	Enclosed by Building	0.1	3,504.000	0.0030	0.0033	0.0030	0.2566	0.1927	0.292	0.00000	0.00000	0.00000	0.25660	0.19270	0.29200	
CONV8	Secondary Crushing	Conveyor Transfer - Dry	Full Enclosure (boot)	0.1	3,504.000	0.0030	0.0033	0.0030	0.2566	0.1927	0.292	0.00000	0.00000	0.00000	0.25660	0.19270	0.29200	
#2 Stone Tank	Storage Structures	Conveyor Transfer - Dry	Enclosed by Building	0.1	3,504.000	0.0030	0.0033	0.0030	0.2566	0.1927	0.292	0.00000	0.00000	0.00000	0.25660	0.19270	0.29200	
CONV12	Wet Processing Plant	Conveyor Transfer - Dry	Full Enclosure (boot)	0.1	1,752.000	0.0030	0.0033	0.0033	0.2628	0.0964	0.4146	0.00000	0.00000	0.00000	0.26280	0.09640	0.41460	
CONV13	Wet Processing Plant	Conveyor Transfer - Dry	Full Enclosure (boot)	0.1	1,752.000	0.0030	0.0033	0.0033	0.2628	0.0964	0.4146	0.00000	0.00000	0.00000	0.26280	0.09640	0.41460	
CONV14	Wet Processing Plant	Conveyor Transfer - Dry	Full Enclosure (boot)	0.1	1,752.000	0.0030	0.0033	0.0033	0.2628	0.0964	0.4146	0.00000	0.00000	0.00000	0.26280	0.09640	0.41460	
MILL1	Wet Processing Plant	Fines Crushing (All) - Wet Suppression	Full Enclosure (boot)	0.1	1,752.000	0.0030	0.0020	0.0000	0.2628	0.1051	0.0961	0.900	0.00000	0.00120	0.00070	0.26280	0.10510	0.06132
CONV15	Wet Processing Plant	Wet Processing Plant - Wet Suppression	Saturated Material (No Visible Emissions)	0.01	1,314.000	0.0014	0.0005	0.0003	0.0099	0.0003	0.0001	0.900	0.00040	0.00046	0.00013	0.00920	0.00032	0.00005
SCREEN1	Wet Processing Plant	Screening (All) - Wet Suppression	Saturated Material (No Visible Emissions)	0.01	1,752.000	0.0020	0.0004	0.0000	0.1933	0.0066	0.0004	0.900	0.00200	0.00040	0.00050	0.01972	0.00062	0.00048
CLASS48.1	Wet Processing Plant	Screening (All) - Wet Suppression	Saturated Material (No Visible Emissions)	0.01	1,752.000	0.0020	0.0004	0.0000	0.1933	0.0066	0.0004	0.900	0.00200	0.00040	0.00050	0.01972	0.00062	0.00048
FEED807	Wet Processing Plant	Screening (All) - Wet Suppression	Saturated Material (No Visible Emissions)	0.01	1,491.600	0.0020	0.0004	0.0000	0.1933	0.0066	0.0004	0.900	0.00200	0.00040	0.00050	0.01548	0.00062	0.00050
TANK2	Wet Processing Plant	Conveyor Transfer - Wet Suppression	None	0.1	1,752.000	0.0014	0.0005	0.0003	0.1226	0.0403	0.0114	0.000	0.00040	0.00046	0.00013	0.12260	0.04026	0.01388
PIPE1	Wet Processing Plant	Conveyor Transfer - Wet Suppression	Saturated Material (No Visible Emissions)	0.01	1,752.000	0.0014	0.0005	0.0003	0.1226	0.0403	0.0114	0.000	0.00040	0.00046	0.00013	0.01226	0.00403	0.00114
FEED151 - WEISES	Wet Processing Plant	Screening (All) - Wet Suppression	Full Enclosure (boot)	0.1	0.000	0.0020	0.0000	0.0000	0.1927	0.0648	0.0044	0.000	0.00200	0.00000	0.00000	0.19270	0.06480	0.00440
CONV17	Wet Processing Plant	Conveyor Transfer - Wet Suppression	Full Enclosure (boot)	0.1	1,752.000	0.0014	0.0005	0.0003	0.1223	0.040	0.011	0.000	0.00040	0.00046	0.00013	0.12230	0.04030	0.01130
CONV18	Wet Processing Plant	Conveyor Transfer - Wet Suppression	Saturated Material (No Visible Emissions)	0.01	1,752.000	0.0014	0.0005	0.0003	0.1223	0.040	0.011	0.000	0.00040	0.00046	0.00013	0.01223	0.00400	0.00113
CONV19	Wet Processing Plant	Conveyor Transfer - Wet Suppression	Full Enclosure (boot)	0.1	1,752.000	0.0014	0.0005	0.0003	0.1223	0.040	0.011	0.000	0.00040	0.00046	0.00013	0.12230	0.04030	0.01130
CONV21	Wet Processing Plant	Conveyor Transfer - Wet Suppression	Enclosed by Building	0.1	1,752.000	0.0014	0.0005	0.0003	0.1223	0.040	0.011	0.000	0.00040	0.00046	0.00013	0.12230	0.04030	0.01130
CONV22	Wet Processing Plant	Conveyor Transfer - Wet Suppression	Partial Enclosure (skin)	0.15	1,752.000	0.0014	0.0005	0.0003	0.1223	0.040	0.011	0.850	0.00040	0.00046	0.00013	0.01896	0.00404	0.00108
CONV23	Wet Processing Plant	Conveyor Transfer - Wet Suppression	Partial Enclosure (skin)	0.15	1,752.000	0.0014	0.0005	0.0003	0.1223	0.040	0.011	0.850	0.00040	0.00046	0.00013	0.01896	0.00404	0.00108
CONV24	Wet Processing Plant	Conveyor Transfer - Wet Suppression	Full Enclosure (boot)	0.1	1,752.000	0.0014	0.0005	0.0003	0.1223	0.040	0.011	0.000	0.00040	0.00046	0.00013	0.12230	0.04030	0.01130
VBFD4	Wet Processing Plant	Conveyor Transfer - Wet Suppression	None	0.15	1,752.000	0.0014	0.0005	0.0003	0.1226	0.0403	0.0114	0.000	0.00040	0.00046	0.00013	0.12260	0.04026	0.01388
CONV25	Wet Processing Plant	Conveyor Transfer - Wet Suppression	Partial Enclosure (skin)	0.15	0.000	0.0014	0.0005	0.0003	0.1226	0.0403	0.0114	0.000	0.00040	0.00046	0.00013	0.01226	0.00403	0.00114
DREX1 #1 (3s)	Wet Processing Plant	Conveyor Transfer - Dry	Wet Scrubber	0.2	1,752.000	0.0030	0.0010	0.0007	0.5256	0.1927	0.292	0.800	0.00300	0.00100	0.00167	0.52560	0.19270	0.29200
SCREEN16	Wet Processing Plant	Screening (All) - Dry	Fabric Filter	0.001	1,752.000	0.0020	0.00870	0.00137	0.0076	0.0076	0.0076	0.999	0.00200	0.00870	0.00137	0.00200	0.00870	0.00137
CONV26	Wet Processing Plant	Conveyor Transfer - Dry	Fabric Filter	0.001	1,752.000	0.0020	0.00870	0.00137	0.0076	0.0076	0.0076	0.999	0.00200	0.00870	0.00137	0.00200	0.00870	0.00137
CONV27	Wet Processing Plant	Conveyor Transfer - Dry	Fabric Filter	0.001	438.000	0.0030	0.0010	0.0007	0.0657	0.0241	0.0326	0.000	0.00300	0.00100	0.00167	0.06570	0.02400	0.03260
MILLS	Wet Processing Plant	Fines Crushing (All) - Dry	Full Enclosure (boot)	0.1	438.000	0.0030	0.0010	0.0007	0.0657	0.0241	0.0326	0.000	0.00300	0.00100	0.00167	0.06570	0.02400	0.03260
CONV28	Wet Processing Plant	Conveyor Transfer - Dry	Full Enclosure (boot)	0.1	438.000	0.0030	0.0010	0.0007	0.0657	0.0241	0.0326	0.000	0.00300	0.00100	0.00167	0.06570	0.02400	0.03260
CONV29	Wet Processing Plant	Conveyor Transfer - Dry	Full Enclosure (boot)	0.1	438.000	0.0030	0.0010	0.0007	0.0657	0.0241	0.0326	0.000	0.00300	0.00100	0.00167	0.06570	0.02400	0.03260
FEED802	Wet Processing Plant	Screening (All) - Wet Suppression	Saturated Material (No Visible Emissions)	0.01	219.000	0.0020	0.00074	0.00020	0.0024	0.0008	0.0001	0.900	0.00200	0.00074	0.00020	0.00240	0.00080	0.00010
FEED803	Wet Processing Plant	Screening (All) - Wet Suppression	Saturated Material (No Visible Emissions)	0.01	219.000	0.0020	0.00074	0.00020	0.0024	0.0008	0.0001	0.900	0.00200	0.00074	0.00020	0.00240	0.00080	0.00010
FEED804	Wet Processing Plant	Screening (All) - Wet Suppression	Saturated Material (No Visible Emissions)	0.01	219.000	0.0020	0.00074	0.00020	0.0024	0.0008	0.0001	0.900	0.00200	0.00074	0.00020	0.00240	0.00080	0.00010
CLASS5	Wet Processing Plant	Screening (All) - Wet Suppression	Enclosed by Building	0.1	219.000	0.0020	0.00074	0.00020	0.0024	0.0008	0.0001	0.900	0.00200	0.00074	0.00020	0.00240	0.00080	0.00010
FEED805	Wet Processing Plant	Screening (All) - Wet Suppression	Enclosed by Building	0.1	219.000	0.0020	0.00074	0.00020	0.0024	0.0008	0.0001	0.900	0.00200	0.00074	0.00020	0.00240	0.00080	0.00010
FEED806	Wet Processing Plant	Screening (All) - Wet Suppression	Enclosed by Building	0.1	219.000	0.0020	0.00074	0.00020	0.0024	0.0008	0.0001	0.900	0.00200	0.00074	0.00020	0.00240	0.00080	0.00010
FEED807	Wet Processing Plant	Screening (All) - Wet Suppression	Enclosed by Building	0.1	219.000	0.0020	0.00074	0.00020	0.0024	0.0008	0.0001	0.900	0.00200	0.00074	0.00020	0.00240	0.00080	0.00010
FEED808	Wet Processing Plant	Screening (All) - Wet Suppression	Enclosed by Building	0.1	219.000	0.0020	0.00074	0.00020	0.0024	0.0008	0.0001	0.900	0.00200	0.00074	0.00020	0.00240	0.00080	0.00010
FEED809	Wet Processing Plant	Screening (All) - Wet Suppression	Enclosed by Building	0.1	219.000	0.0020	0.00074	0.00020	0.0024	0.0008	0.0001	0.900	0.00200	0.00074	0.00020	0.00240	0.00080	0.00010
FEED810	Wet Processing Plant	Screening (All) - Wet Suppression	Enclosed by Building															





## Baghouse Emissions

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Title V ID	Source Description	Process Unit Description	Flowrate (dscfm)	Outlet Grain Loading (gr/dscf)	Annual Hours of Operation (hrs/year)	Emission Rate (tpy) <sup>A,B,C</sup>		
						PM	PM <sub>10</sub>	PM <sub>2.5</sub>
Fluid Bed Dryer & Rotary Dryer	Fluid Bed Dryer & Rotary Dryer	Fluid Bed Dryer & Rotary Dryer	--	--	--	95.4800	95.4800	76.3840
Screening and Unground Sanding	Screening and Unground Sanding Processing CF#40	Screening and Unground Sanding Processing CF#40	5,500	0.014	8,760	2.8908	2.8908	2.3126
Screening and Unground Sanding	Screening and Unground Sanding Processing CF#6	Screening and Unground Sanding Processing CF#6	20,000	0.014	8,760	10.5120	10.5120	8.4096
<b>Total</b>						<b>108.8828</b>	<b>108.8828</b>	<b>87.1062</b>

A. Fluid Bed Dryer & Rotary Dryer Emissions based on combined TVOP Limit.

B.  $PM_{10}/PM_{2.5}$  Emission Rate (tpy) = Flowrate (acfm) \* Outlet Grain Loading (gr/scf) \* (1 lb / 7,000 gr) \* (1 ton / 2,000 lb) \* Annual Hours of Operation (hrs/year) \* (60 min / 1 hr)

Source Description Screening and Unground Sanding Processing	5,500 acfm	0.01 gr/dscf	1 lb/7,000 gr	1 ton/2,000 lb	8,760 hrs/year	60 min/1 hr	=	2.8908 tpy
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C. Assuming  $PM_{2.5}$  emissions are 80% of  $PM_{10}$  emissions.

## Stockpile Emissions

### Material Storage Pile Wind Erosion Annual Emissions

Title V ID	Size (acres)	Emission Control Method	Control Efficiency	Days in Reporting Period	Emission Factor <sup>A</sup>			Unit	Emission Rate (tpy)		
					PM	PM <sub>10</sub>	PM <sub>2.5</sub>		PM	PM <sub>10</sub>	PM <sub>2.5</sub>
Golf Sand Stockpile & Float Sand Stockpile	5.63	None	0%	365	698.14	349.07	52.36	lb/acre	1.97	0.98	0.15
Reclaim Stockpile	1.386	Partial Enclosure (skirt)	0%	365	698.14	349.07	52.36	lb/acre	0.48	0.24	0.04
<b>Total Stockpile Erosion Emissions</b>									<b>2.45</b>	<b>1.22</b>	<b>0.18</b>

A. USEPA, 1992 (Fugitive Dust Background and Technical Information Document for Best Available Control Measures, Section 2.3.1.3.3, Wind Emissions from Continuously Active Piles). USEPA, 2006 13.2.5 for k factor:

EF (lb/day/acre) = k x 1.7 x (s/1.5) x ((365 - p)/235) x (f/15)\*(1-% Control Efficiency)

B. Total PM assumed to be equal to PM < 30 µm

C. Total days of precipitation greater than or equal to 0.01 inch from U.S. EPA, AP-42 Section 13.2.2 - Unpaved Roads (November 2006), Figure 13.2.2-1

Days of precipitation greater than or equal to 0.01 inch (p)	102
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D. Time (%) that unobstructed wind speed exceeds 5.4 m/s at mean pile height from climatological data at Hagerstown, MD from 2012-2014

Time (%) that unobstructed wind speed exceeds 5.4 m/s at mean pile height (f)	7.8
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E. Silt content from U.S. EPA, AP-42 Section 13.2.4 - Aggregate Handling and Storage Piles (November 2006), Table 12.2.4-1:

Silt Content (%), (s)	2.9
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F. Particle Size multiplier from U.S. EPA, AP-42 Section 13.2.5 - Industrial Wind Erosion (November 2006), Table after Equation 2

Particle Size multiplier (k)  
 1 (for PM < 30 µm)  
 0.5 (for PM < 10 µm)  
 0.075 (for PM < 2.5 µm)

## Blasting Emissions

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Emission Factor (lb/blast)		
PM	PM <sub>10</sub>	PM <sub>2.5</sub>
6.47	3.3654	0.1942

Title V ID	Area Removed per Blast	Number of Blasts per Year	Control Method	Control Factor <sup>A</sup>	PM Emission Factor (lb/blast) <sup>B</sup>	Emission Rate (tpy) <sup>C, D</sup>		
						PM	PM <sub>10</sub>	PM <sub>2.5</sub>
Quarry	5978.823529	51	None	1	6.47	0.1650	0.0858	0.0050
<b>Total</b>						<b>0.1650</b>	<b>0.0858</b>	<b>0.0050</b>

A. Control factors from *Control Factors* table.

B. U.S. EPA, AP-42 Section 11.9 Western Surface Coal Mining (October 1998), Table 11.9-1.

C. PM Emission Rate (tpy) = (PM Emission Factor (lbs PM per blast))\*(Number of blasts per year)\*(1 ton/2,000 lbs.)

$$\text{Quarry PM emission Rate (tpy)} = \frac{6.472 \text{ lb PM}}{\text{blast}} \times 51.0 \text{ blasts} \times 1 \times \frac{1 \text{ ton}}{2,000 \text{ lb}} = 0.165 \text{ tpy}$$

D. PM10 and PM2.5 emissions estimated using scaling factors from U.S. EPA, AP-42 Section 11.9 Western Surface Coal Mining (October 1998), Table 11.9-1.

Scaling factor for PM <sub>10</sub>	0.52
Scaling factor for PM <sub>2.5</sub>	0.03

## Unpaved Roads Emissions

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

### Mean Vehicle Weight

Vehicle Type	Product Handled	Weight Empty (tons)	Weight Full (tons)	Mean Vehicle Weight <sup>A</sup> (tons)
Haul Trucks/Trucks	Quarried material	68	157.5	112.75

A. Mean Vehicle Weight (tons) = (Weight Full (tons) - Weight Empty (tons))/2

### Vehicle Mile Traveled

Emission Unit ID	Source Description	Trip Description	Vehicle Type	Product Handled	Annual Throughput (tons/year)	Roundtrip Length (miles/trip)	Number of Trips <sup>A</sup> (trips/year)	Vehicle Mile Traveled <sup>B</sup> (VMT/year)
Roads	Facility Roadways	Unpaved Haul Roads	Haul Trucks/Trucks	Quarried material	8,760,000	2.00	77,694	155,388
Roads	Facility Roadways	Unpaved Plant Traffic	Haul Trucks/Trucks	Quarried material	8,760,000	1.00	77,694	77,694
Roads	Facility Roadways - Limestone	Unpaved Plant Traffic	Haul Trucks/Trucks	Quarried material	4,380,000	0.40	38,847	15,539

A. Number of Trips (trips/year) = Annual Throughput (tons/year) / (Mean Vehicle Weight (tons))

$$\text{Unpaved Haul Roads Number of Trips (trips/year)} = \frac{8,760,000 \text{ tons}}{\text{year}} \div \frac{1}{112.75 \text{ tons}} = 77,694 \text{ trips/year}$$

B. Vehicle Mile Traveled (VMT/year) = Roundtrip Length (miles/trip) \* Number of Trips (trips/year)

$$\text{Unpaved Haul Roads Vehicle Mile Traveled (VMT/year)} = \frac{2.00 \text{ miles}}{\text{trip}} \times \frac{77,694 \text{ trips}}{\text{year}} = 155,388 \text{ VMT/year}$$

## Unpaved Roads Emissions

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

### Emission Calculations

Emission Unit ID	Source Description	Trip Description	Emission Factor <sup>A</sup> (lb/VMT)			Emission Rate <sup>B</sup> (tpy)		
			PM	PM <sub>10</sub>	PM <sub>2.5</sub>	PM	PM <sub>10</sub>	PM <sub>2.5</sub>
Roads	Facility Roadways	Unpaved Haul Roads	8.89	2.27	0.23	207.2703	52.8256	5.2826
Roads	Facility Roadways	Unpaved Plant Traffic	8.89	2.27	0.23	103.6351	26.4128	2.6413
Roads	Facility Roadways - Limestone	Unpaved Plant Traffic	8.89	2.27	0.23	20.7270	5.2826	0.5283
<b>Total</b>						<b>331.6324</b>	<b>84.5209</b>	<b>8.4521</b>

A. U.S. EPA, AP-42 Section 13.2.2 - Unpaved Roads (November 2006), Equations 1a and 2.

$$\text{Emission Factor (lb/VMT)} = (\text{Particle Size Multiplier (lb/VMT)} * (\text{Surface Material Silt Content (\%)} / 12)^a * (\text{Mean Vehicle Weight (tons)} / 3)^b) * ((365 - P)/365)$$

$$\text{Source Description Facility Roadways PM Emission Factor (lb/VMT)} = \frac{4.9 \text{ lb}}{\text{VMT}} \left( \frac{4.8 / 100}{12} \right)^{0.7} * \left( \frac{112.75}{3} \right)^{0.45} * \frac{(365 - 119)}{365} = 8.89 \text{ lb/VMT}$$

Parameter	Value	Reference
PM Particle Size Multiplier (lb/VMT)	4.9	U.S. EPA, AP-42 Section 13.2.2 - Unpaved Roads (November 2006), Table 13.2.2-2.
PM <sub>10</sub> Particle Size Multiplier (lb /VMT)	1.5	
PM <sub>2.5</sub> Particle Size Multiplier (lb/VMT)	0.15	
PM Empirical Constant a	0.7	
PM <sub>10</sub> Empirical Constant a	0.9	
PM <sub>2.5</sub> Empirical Constant a	0.9	
PM Empirical Constant b	0.45	
PM <sub>10</sub> Empirical Constant b	0.45	
PM <sub>2.5</sub> Empirical Constant b	0.45	
Surface Material Silt Content (%)	4.8	U.S. EPA, AP-42 Section 13.2.2 - Unpaved Roads (November 2006), Table 13.2.2-1.
P (Number of days with ≥ 0.01" precipitation in a year)	119	U.S. EPA, AP-42 Section 13.2.2 - Unpaved Roads (November 2006), Figure 13.2.2-1.
Control Factor	0.3	Water Spray

B. Emission Rate (tpy) = Emission Factor (lb/VMT) \* Vehicle Mile Traveled (VMT/year) \* (1 ton / 2,000 lb) \* (Control Factor)

$$\text{Source Description Facility Roadways PM Emission Rate (tpy)} = \frac{8.89 \text{ lb}}{\text{VMT}} \left| \frac{77,694 \text{ VMT}}{\text{year}} \right| \left| \frac{1 \text{ ton}}{2,000 \text{ lb}} \right| \left| 0.3 \right| = 207.2703 \text{ tpy}$$

## Permitted Limit Emissions

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Emission Unit ID	Emission Factor			Input Data		Emission
	Value	Units	Pollutant	Value	Units	Rate (tpy) <sup>A</sup>
Material Transfer/Conveying	1.00	lb/hr	PM	8,760	hrs/year	4.3800
Material Transfer/Conveying	1.00	lb/hr	PM10	8,760	hrs/year	4.3800
Material Transfer/Conveying	0.80	lb/hr	PM2.5	8,760	hrs/year	3.5040
Screening	0.69	lb/hr	PM	8,760	hrs/year	3.0003
Screening	0.69	lb/hr	PM10	8,760	hrs/year	3.0003
Screening	0.55	lb/hr	PM2.5	8,760	hrs/year	2.4002
Bulk Load and BFS Bagger	0.69	lb/hr	PM	8,760	hrs/year	3.0003
Bulk Load and BFS Bagger	0.69	lb/hr	PM10	8,760	hrs/year	3.0003
Bulk Load and BFS Bagger	0.55	lb/hr	PM2.5	8,760	hrs/year	2.4002
Bulk Bagger	0.10	lb/hr	PM	8,760	hrs/year	0.4380
Bulk Bagger	0.10	lb/hr	PM10	8,760	hrs/year	0.4380
Bulk Bagger	0.08	lb/hr	PM2.5	8,760	hrs/year	0.3504
#6 Silo	0.05	lb/hr	PM	8,760	hrs/year	0.2190
#6 Silo	0.05	lb/hr	PM10	8,760	hrs/year	0.2190
#6 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year	0.1752
#7/#8 Silo	0.70	lb/hr	PM	8,760	hrs/year	3.0660
#7/#8 Silo	0.70	lb/hr	PM10	8,760	hrs/year	3.0660
#7/#8 Silo	0.56	lb/hr	PM2.5	8,760	hrs/year	2.4528
#5 Silo	0.05	lb/hr	PM	8,760	hrs/year	0.2190
#5 Silo	0.05	lb/hr	PM10	8,760	hrs/year	0.2190
#5 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year	0.1752
#4 Silo	0.05	lb/hr	PM	8,760	hrs/year	0.2190
#4 Silo	0.05	lb/hr	PM10	8,760	hrs/year	0.2190
#4 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year	0.1752
#3 Silo	0.05	lb/hr	PM	8,760	hrs/year	0.2190
#3 Silo	0.05	lb/hr	PM10	8,760	hrs/year	0.2190
#3 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year	0.1752
#2 Silo	0.05	lb/hr	PM	8,760	hrs/year	0.2190
#2 Silo	0.05	lb/hr	PM10	8,760	hrs/year	0.2190
#2 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year	0.1752
#1 Silo	0.05	lb/hr	PM	8,760	hrs/year	0.2190
#1 Silo	0.05	lb/hr	PM10	8,760	hrs/year	0.2190
#1 Silo	0.04	lb/hr	PM2.5	8,760	hrs/year	0.1752

A. Emission Rate (tpy) = Emission Factor (lb/hr) \* Input Data (hrs/year) \* (1 ton / 2,000 lb)

$$\text{Material Transfer/Conveying PM Emission Rate (tpy)} = \frac{1.00 \text{ lb/hr PM} \times 8,760 \text{ hrs/year}}{2,000 \text{ lb}} = 4.38 \text{ tpy}$$

### Combustion Emissions (Total)

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Emission Unit	Source Description	Process Unit Description	Fuel Used	Fuel Throughput		Emission Factor <sup>A,C</sup>													Value	
				Value	Unit	PM (filt)	PM <sub>1.0</sub> (filt)	PM <sub>2.5</sub> (filt)	PM (con)	NO <sub>x</sub>	CO	SO <sub>2</sub>	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	VOC	NH <sub>3</sub>	Lead		
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	4,146.40	1,000 gal/year	17.005	14.6985	9.5735	1.5	55	5	235.5	24783	0.99	0.198	0.28	0.8	0.0015	lb/1,000 gal	
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	4,146.40	1,000 gal/year	0	0	0	1.5	19	5	220.5	23117.6	0.9372	0.18744	0.22	0.8	0.10148	lb/1,000 gal	
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	6,797.38	1,000 gal/year	0.2	0.2	0.2	0.5	19	3.2	0.054	12586.57	0.6006	0.12012	0.3	0.285	0	lb/1,000 gal	
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	4,442.57	1,000 gal/year	2	1	0.25	1.3	20	5	28.4	22454.26	0.9108	0.18216	0.2	0.8	0.00126	lb/1,000 gal	
Dryer #1	Dry Sand Processing	Fluid Bed Dryer - Natural Gas Combustion	Natural Gas	609.76	million scf/year	1.9	1.9	1.9	5.7	100	84	0.6	120018.5	2.26194	0.22619	5.5	0.49	0.0005	lb/million scf	
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	1,637.11	1,000 gal/year	0.2	0.2	0.2	0.5	19	3.2	0.054	12586.57	0.6006	0.12012	0.3	0.285	0	lb/1,000 gal	
<b>Fluid Bed Dryer Total</b>																				
<b>Fluid Rotary Dryer Total</b>																				

A. Emission factors from *Emission Factors for Combustion* table for each source.

B. Emission Rate (tpy) = Emission Factor (lb/1,000 gal) \* Fuel Throughput (1,000 gal/year) \* (1 ton / 2,000 lb)

Process Unit Description Fluid Bed Dryer -  
Propane Combustion NOx Emission Rate

$$\text{(tpy)} = \frac{19 \text{ lb/1,000 gal} \times 6,797.38 \text{ 1,000 gal/year}}{2,000 \text{ lb}} = 64.5751 \text{ tpy}$$

C. PM, PM<sub>10</sub> and PM<sub>2.5</sub> emissions from recycled oil combustion on the Fluid Bed Dryer and propane combustion on the Rotary Dryer have been conservatively accounted for in calculations from stack testing done in December, 2012. (See Baghouse tab).

### Combustion Emissions (Total)

**Company Name:** U.S. Silica

**Site Name:** Berkeley Springs Plant

**Project:** Potential to Emit Calculations

Emission Unit	Source Description	Process Unit Description	Fuel Used	Fuel Throughput		Emission Rate (tpy) <sup>B</sup>												
				Value	Unit	PM (filt)	PM <sub>10</sub> (filt)	PM <sub>2.5</sub> (filt)	PM (con)	NO <sub>x</sub>	CO	SO <sub>2</sub>	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	VOC	NH <sub>3</sub>	Lead
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	4,146.40	1,000 gal/year	35.25	30.47	19.85	3.11	114.03	10.37	488.24	51380.12	2.05	0.41	0.58	1.66	0.00
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	4,146.40	1,000 gal/year	0.00	0.00	0.00	3.11	39.39	10.37	457.14	47927.41	1.94	0.39	0.46	1.66	0.21
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	6,797.38	1,000 gal/year	0.68	0.68	0.68	1.70	64.58	10.88	0.18	42777.84	2.04	0.41	1.02	0.97	0.00
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	4,442.57	1,000 gal/year	4.44	2.22	0.56	2.89	44.43	11.11	63.08	49877.32	2.02	0.40	0.44	1.78	0.00
Dryer #1	Dry Sand Processing	Fluid Bed Dryer - Natural Gas Combustion	Natural Gas	609.76	million scf/year	0.58	0.58	0.58	1.74	30.49	25.61	0.18	36591.54	0.69	0.07	1.68	0.15	0.00
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	1,637.11	1,000 gal/year	0.16	0.16	0.16	0.41	15.55	2.62	0.04	10302.83	0.49	0.10	0.25	0.23	0.00
<b>Fluid Bed Dryer Total</b>						<b>35.25</b>	<b>30.47</b>	<b>19.85</b>	<b>3.11</b>	<b>114.03</b>	<b>25.61</b>	<b>488.24</b>	<b>51380.12</b>	<b>2.05</b>	<b>0.41</b>	<b>1.68</b>	<b>1.78</b>	<b>0.21</b>
<b>Fluid Rotary Dryer Total</b>						<b>0.16</b>	<b>0.16</b>	<b>0.16</b>	<b>0.41</b>	<b>15.55</b>	<b>2.62</b>	<b>0.04</b>	<b>10302.83</b>	<b>0.49</b>	<b>0.10</b>	<b>0.25</b>	<b>0.23</b>	<b>0.00</b>

A. Emission factors from *Emission Factors for Combustion* table for each source.

B. Emission Rate (tpy) = Emission Factor (lb/1,000 gal) \* Fuel Throughput (1,000 gal/year) \* (1 ton / 2,000 lb)

Process Unit Description Fluid Bed Dryer - Propane Combustion NOx Emission Rate

$$(\text{tpy}) = \frac{19 \text{ lb/1,000 gal} \times 6,797.38 \text{ 1,000 gal/year} \times 1 \text{ ton}}{2,000 \text{ lb}}$$

C. PM, PM<sub>10</sub> and PM<sub>2.5</sub> emissions from recycled oil combustion on the Fluid Bed Dryer and propane combustion on the Rotary Dryer have been



**Combustion Emissions (Total)**

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

Emission Unit	Source Description	Process Unit Description	Fuel Used	Fuel Throughput		Emission Factor <sup>A</sup>													
				Value	Unit	Antimony	Arsenic	Beryllium	Cadmium	Chloride	Chromium	Cobalt	Manganese	Mercury	Nickel	Selenium	Phosphorus	PCBs	Phenol
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	4,146.40	1,000 gal/year	5.25E-03	1.32E-03	2.78E-05	3.98E-04	3.47E-01	8.45E-04	6.02E-03	3.00E-03	1.13E-04	8.45E-02	6.83E-04	9.46E-03	-	-
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	4,146.40	1,000 gal/year	4.50E-03	7.35E-03	1.80E-03	8.82E-03	3.47E-01	1.84E-02	5.70E-03	6.80E-02	-	1.60E-01	-	3.60E-02	7.35E-03	2.40E-03
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	6,797.38	1,000 gal/year	-	1.78E-05	1.07E-06	9.81E-05	-	1.25E-04	7.49E-06	3.39E-05	2.32E-05	1.87E-04	2.14E-06	-	-	-
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	4,442.57	1,000 gal/year	-	5.52E-04	4.14E-04	4.14E-04	-	4.14E-04	-	8.28E-04	4.14E-04	4.14E-04	2.07E-03	-	-	-
Dryer #1	Wet Processing Plant	Fluid Bed Dryer- Natural Gas Combustion	Natural Gas	609.76	million scf/year	2.00E-04	1.20E-05	1.10E-03	-	1.40E-03	8.40E-05	3.80E-04	2.60E-04	2.10E-03	2.40E-05	-	-	-	0.00E+00
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	1,637.11	1,000 gal/year	-	1.78E-05	1.07E-06	9.81E-05	-	1.25E-04	7.49E-06	3.39E-05	2.32E-05	1.87E-04	2.14E-06	-	-	-

Emission Unit	Source Description	Process Unit Description	Fuel Used	Fuel Throughput		Emission Rate (tpy) <sup>B</sup>													
				Value	Unit	Antimony	Arsenic	Beryllium	Cadmium	Chloride	Chromium	Cobalt	Manganese	Mercury	Nickel	Selenium	Phosphorus	PCBs	Phenol
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	4,146.40	1,000 gal/year	0.0109	0.0027	0.0001	0.0008	0.7194	0.0018	0.0125	0.0062	0.0002	0.1752	0.0014	0.0196		
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	4,146.40	1,000 gal/year	0.0093	0.0152	0.0037	0.0183	0.7194	0.0382	0.0118	0.1410		0.3317		0.0746	0.0152	0.0050
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	6,797.38	1,000 gal/year		0.0001	0.0000	0.0003		0.0004	0.0000	0.0001	0.0001	0.0006	0.0000			
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	4,442.57	1,000 gal/year		0.0012	0.0009	0.0009		0.0009		0.0018	0.0009	0.0009	0.0046			
Dryer #1	Wet Processing Plant	Fluid Bed Dryer- Natural Gas Combustion	Natural Gas	609.76	million scf/year		0.0001	0.0000	0.0003		0.0004	0.0000	0.0001	0.0001	0.0006	0.0000			0.0000
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	1,637.11	1,000 gal/year		0.0000	0.0000	0.0001		0.0001	0.0000	0.0000	0.0000	0.0002	0.0000			
<b>Fluid Bed Dryer Total</b>						<b>0.0109</b>	<b>0.0152</b>	<b>0.0037</b>	<b>0.0183</b>	<b>0.7194</b>	<b>0.0382</b>	<b>0.0125</b>	<b>0.1410</b>	<b>0.0009</b>	<b>0.3317</b>	<b>0.0046</b>	<b>0.0746</b>	<b>0.0152</b>	<b>0.0049</b>
<b>Fluid Rotary Dryer Total</b>							<b>0.0000</b>	<b>0.0000</b>	<b>0.0001</b>		<b>0.0001</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0002</b>	<b>0.0000</b>			

A. Emission factors from *Emission Factors for Combustion* table for each source.

B. Emission Rate (tpy) = Emission Factor (lb/1,000 gal) \* Fuel Throughput (1,000 gal/year) \* (1 ton / 2,000 lb)

Process Unit Description Fluid Bed Dryer - Recycled Oil Combustion Antimony  
Emission Rate (tpy) =  $\frac{0.0045 \text{ lb/1,000 gal}}{1,000 \text{ gal}} \times 4,146.4 \text{ gal/year} \times \frac{1 \text{ ton}}{2,000 \text{ lb}} = 0.0093 \text{ tpy}$

**Combustion Emissions (Total)**

Company Name: U.S. Silica  
 Site Name: Berkeley Springs Plant  
 Project: Potential to Emit Calculations

Emission Unit	Source Description	Process Unit Description	Fuel Used	Emission Factors													
				Dichlorobenzene	Naphthalene	Phenanthrene	Dibutylphthalate	Butylbenzylphthalate	Bis(2-ethylhexyl)phthalate	Pyrene	Benz(a)anthracene	Benzo(a)pyrene	Formaldehyde	POM	Benzene	Ethylbenzene	
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	-	1.13E-03	1.05E-05	-	-	-	-	4.25E-06	4.01E-06	-	6.10E-02	1.30E-03	2.14E-04	6.36E-05
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	8.00E-07	1.30E-02	1.10E-02	3.40E-05	5.10E-04	2.20E-03	7.10E-03	4.00E-03	4.00E-03	-	-	-	-	-
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	1.07E-04	5.44E-05	1.52E-06	-	-	-	4.46E-07	1.61E-07	1.07E-07	6.69E-03	-	1.87E-04	-	-
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	-	1.13E-03	1.05E-05	-	-	-	4.25E-06	4.01E-06	-	6.10E-02	3.30E-03	2.14E-04	6.36E-05	-
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Natural Gas Combustion	Natural Gas	1.20E-03	6.10E-04	1.70E-05	-	-	-	5.00E-06	1.80E-06	1.20E-06	7.50E-02	-	2.10E-03	-	-
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	1.07E-04	5.44E-05	1.52E-06	-	-	-	4.46E-07	1.61E-07	1.07E-07	6.69E-03	-	1.87E-04	-	-

Emission Unit	Source Description	Process Unit Description	Fuel Used	Emission Factors													
				Dichlorobenzene	Naphthalene	Phenanthrene	Dibutylphthalate	Butylbenzylphthalate	Bis(2-ethylhexyl)phthalate	Pyrene	Benz(a)anthracene	Benzo(a)pyrene	Formaldehyde	POM	Benzene	Ethylbenzene	
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil		0.0023	0.0000				0.0000	0.0000		0.1265	0.0027	0.0004	0.0001	
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	0.0000	0.0270	0.0228	0.0001	0.0011	0.0046	0.0147	0.0083	0.0083					
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	0.0004	0.0002	0.0000				0.0000	0.0000	0.0000	0.0227		0.0006		
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil		0.0025	0.0000				0.0000	0.0000		0.1355	0.0073	0.0005	0.0001	
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Natural Gas Combustion	Natural Gas	0.0004	0.0002	0.0000				0.0000	0.0000	0.0000	0.0229		0.0006		
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	0.0001	0.0000	0.0000				0.0000	0.0000	0.0000	0.0055		0.0002		
				<b>0.00037</b>	<b>0.02695</b>	<b>0.02281</b>	<b>0.00007</b>	<b>0.00106</b>	<b>0.00456</b>	<b>0.01472</b>	<b>0.00829</b>	<b>0.00829</b>	<b>0.13550</b>	<b>0.00733</b>	<b>0.00064</b>	<b>0.00014</b>	
				<b>0.00009</b>	<b>0.00004</b>	<b>0.00000</b>				<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.00548</b>		<b>0.00015</b>		

A. Emission factors from Emission Factors for Combustion table for each source.  
 B. Emission Rate (tpy) = Emission Factor (lb/1,000 gal) \* Fuel Throughput (1,000 gal/year) \* (1 t / 2,204.62 lb)  
 Process Unit Description Fluid Bed Dryer - Recycled Oil Combustion Antimony  
 Emission Rate (tpy) =  $\frac{0.0045 \text{ lb/1,000 gal}}{2,204.62} \times 1,000 \text{ gal/year} \times 1 \text{ t/2,204.62 lb}$

**Combustion Emissions (Total)**

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

Emission Unit	Source Description	Process Unit Description	Fuel Used	1,1,1-Trichloroethane	Toluene	o-Xylene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(b,k)fluoranthene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	2.36E-04	6.20E-03	1.09E-04	2.11E-05	2.53E-07	1.22E-06	1.48E-06	-	-	2.26E-06	2.38E-06
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	-	-	-	-	-	-	-	-	-	-	-
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	-	3.03E-04	-	1.61E-07	1.61E-07	2.14E-07	-	1.61E-07	1.61E-07	1.07E-07	1.61E-07
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	2.36E-04	6.20E-03	1.09E-04	2.11E-05	2.53E-07	1.22E-06	1.48E-06	-	-	2.26E-06	2.38E-06
Dryer #1	Wet Processing Plant	Fluid Bed Dryer- Natural Gas Combustion	Natural Gas	-	3.40E-03	-	1.80E-06	1.80E-06	2.40E-06	-	1.80E-06	1.80E-06	1.20E-06	1.80E-06
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	-	3.03E-04	-	1.61E-07	1.61E-07	2.14E-07	-	1.61E-07	1.61E-07	1.07E-07	1.61E-07

Emission Unit	Source Description	Process Unit Description	Fuel Used	1,1,1-Trichloroethane	Toluene	o-Xylene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(b,k)fluoranthene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	0.0005	0.0129	0.0002	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil											
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane		0.0010		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	0.0005	0.0138	0.0002	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000
Dryer #1	Wet Processing Plant	Fluid Bed Dryer- Natural Gas Combustion	Natural Gas		0.0010		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane		0.0002		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000
				<b>0.00052</b>	<b>0.01377</b>	<b>0.00024</b>	<b>0.00005</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.00001</b>	<b>0.00001</b>
					<b>0.00025</b>		<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>		<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>

A. Emission factors from *Emission Factors for Combustion* table for each source.  
 B. Emission Rate (tpy) = Emission Factor (lb/1,000 gal) \* Fuel Throughput (1,000 gal/year) \* (1 t / 2,204.62 lb)  
 Process Unit Description Fluid Bed Dryer - Recycled Oil Combustion Antimony  
 Emission Rate (tpy) =  $\frac{0.0045 \text{ lb/1,000 gal}}{2,204.62} \times 1,000 \text{ gal/year} \times 1 \text{ t/2,204.62 lb}$

**Combustion Emissions (Total)**

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

Emission Unit	Source Description	Process Unit Description	Fuel Used	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Hexane	2-Methylnaphthalene <sup>B</sup>	3-Methylchloranthrene <sup>B</sup>	7,12- Dimethylbenz(a)anthracene <sup>B</sup>	Units
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	1.67E-06	4.84E-06	4.47E-06	2.14E-06	-	-	-	-	lb/1,000 gal
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil	-	-	-	-	-	-	-	-	lb/1,000 gal
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	1.07E-07	2.68E-07	2.50E-07	1.61E-07	1.61E-01	2.14E-06	1.61E-07	1.43E-06	lb/1,000 gal
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	1.67E-06	4.84E-06	4.47E-06	2.14E-06	-	-	-	-	lb/1,000 gal
Dryer #1	Wet Processing Plant	Fluid Bed Dryer- Natural Gas Combustion	Natural Gas	1.20E-06	3.00E-06	2.80E-06	1.80E-06	1.80E+00	2.40E-05	1.80E-06	1.60E-05	lb/million scf
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	1.07E-07	2.68E-07	2.50E-07	1.61E-07	1.61E-01	2.14E-06	1.61E-07	1.43E-06	lb/1,000 gal

Emission Unit	Source Description	Process Unit Description	Fuel Used	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Hexane	2-Methylnaphthalene <sup>B</sup>	3-Methylchloranthrene <sup>B</sup>	7,12- Dimethylbenz(a)anthracene <sup>B</sup>
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 6 FO Combustion	No. 6 Fuel Oil	0.0000	0.0000	0.0000	0.0000				
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Recycled Oil Combustion	Recycled Oil								
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - Propane Combustion	Propane	0.0000	0.0000	0.0000	0.0000	0.5458	0.0000	0.0000	0.0000
Dryer #1	Wet Processing Plant	Fluid Bed Dryer - No. 2 FO Combustion	No. 2 Fuel Oil	0.0000	0.0000	0.0000	0.0000				
Dryer #1	Wet Processing Plant	Fluid Bed Dryer- Natural Gas Combustion	Natural Gas	0.0000	0.0000	0.0000	0.0000	0.5488	0.0000	0.0000	0.0000
Dryer #2	Wet Float Plant	Float Rotary Dryer - Propane Combustion	Propane	0.0000	0.0000	0.0000	0.0000	0.1315	0.0000	0.0000	0.0000
				<b>0.00000</b>	<b>0.00001</b>	<b>0.00001</b>	<b>0.00000</b>	<b>0.54879</b>	<b>0.00001</b>	<b>0.00000</b>	<b>0.00000</b>
				<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.13145</b>	<b>0.00000</b>	<b>0.00000</b>	<b>0.00000</b>

A. Emission factors from *Emission Factors for Combustion* table for each source.  
 B. Emission Rate (tpy) = Emission Factor (lb/1,000 gal) \* Fuel Throughput (1,000 gal/year) \* (1 t / 2,204.62 lb)  
 Process Unit Description Fluid Bed Dryer - Recycled Oil Combustion Antimony  
 Emission Rate (tpy)= 0.0045 lb/1,000 gal

### Limestone Emissions (Total)

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

Title V ID	Description	EP ID	Emissions <sup>A</sup>					
			Uncontrolled					
			PM		PM-10		PM-2.5	
LB/HR	TPY	LB/HR	TPY	LB/HR	TPY			
STOCK1	Stockpile	FP01	0.007	0.029	0.003	0.014	0.000	0.002
CRUSH1	Primary Crusher	E02	1.100	4.818	0.370	1.621	0.000	0.000
CRUSH2	Secondary cone crusher	E04	1.100	4.818	0.370	1.621	0.000	0.000
SCREN1	scalping screener	E01	1.100	4.818	0.370	1.621	0.000	0.000
SCREN2	screener	E03	1.100	4.818	0.370	1.621	0.000	0.000
SCREN3	screener	E05	1.100	4.818	0.370	1.621	0.000	0.000
TRUCK1	Front end loader feeding scalping screen	TP01	0.008	0.035	0.008	0.035	0.008	0.035
FEEDER1	Screen feeding crusher	TP02	0.070	0.307	0.023	0.101	0.007	0.028
CRUSH1	Crusher onto belt conveyor	TP03	0.070	0.307	0.023	0.101	0.007	0.028
SCREN1	Belt conveyor feeding screener	TP04	0.070	0.307	0.023	0.101	0.007	0.028
SCRENBC1	Conveyor from Screener	TP05	0.070	0.307	0.023	0.101	0.007	0.028
SCRENBC2	Conveyor from Screener	TP06	0.070	0.307	0.023	0.101	0.007	0.028
SCRENBC3	Conveyor from Screener	TP07	0.070	0.307	0.023	0.101	0.007	0.028
STACKBC1	Conveyor belt transfer	TP08	0.070	0.307	0.023	0.101	0.007	0.028
STACKBC2	Conveyor belt transfer	TP09	0.070	0.307	0.023	0.101	0.007	0.028
CRUSH2	Conveyor belt Feeding Crusher	TP10	0.070	0.307	0.023	0.101	0.007	0.028
CRUSHSCR1	Crushing Feeding Screener	TP11	0.070	0.307	0.023	0.101	0.007	0.028
SCRENBC4	Conveyor from Screener	TP12	0.070	0.307	0.023	0.101	0.007	0.028
SCRENBC5	Conveyor from Screener	TP13	0.070	0.307	0.023	0.101	0.007	0.028
SCRENBC6	Conveyor from Screener	TP14	0.070	0.307	0.023	0.101	0.007	0.028
SCRENBC7	Conveyor from Screener	TP15	0.070	0.307	0.023	0.101	0.007	0.028
<b>Total</b>			<b>6.495</b>	<b>28.446</b>	<b>2.183</b>	<b>9.563</b>	<b>0.099</b>	<b>0.436</b>
Annual Operations:		4,380,000		tons				
		8,760		hours				

Limestone	Emission Factors <sup>A</sup>			
	Controlled (Water Sprays)			
	PM	PM10	PM2.5	Units
Secondary Crushing	0.002	0.001	0.000	lb/ton
Screening	0.002	0.001	0.000	lb/ton
Truck Unloading	0.000016	0.000016	0.000016	lb/ton
Transfer - Conveyor	0.00014	0.000046	0.000013	lb/ton
Stockpiles	0.156	0.078	0.012	lb/day

A. Obtained from construction permit application from September 2021.

**Tank Emissions**

**Company Name:** U.S. Silica  
**Site Name:** Berkeley Springs Plant  
**Project:** Potential to Emit Calculations

Title V ID	Source Description	Material	Capacity Value (gal)	Emission Factor <sup>B</sup> (lb/gal)				
				Benzene	Ethylbenzene	n-Hexane	Toluene	VOC
Tank No. 1	Diesel Fuel Tank	Diesel	10,000.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 2	Used Oil Tank at Maintenance garage	Used Oil	275.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 3	Used Oil Tank at Maintenance garage	Used Oil	275.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 4	#1 Oil Tank at Maintenance garage	Oil	275.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 5	#2 Oil Tank at Maintenance garage	Oil	275.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 6	#3 Oil Tank at Maintenance garage	Oil	275.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 7	#4 Oil Tank at Maintenance garage	Oil	275.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 8	Recycled Oil Tank near Float Plant	Recycled Oil	10,000.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 11	Kerosene Tank at C & R Shop	Kerosene	275.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 12	Gasoline Tank at Office Building	Gasoline	1,000.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 13	Lube Oil Tank at Scondary Crusher	Lube Oil	300.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 16	Recycled Oil	Recycled Oil	30,000.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 17	Recycled Oil	Recycled Oil	30,000.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 24	Petroleum Sulfonate (Conditioner) Tank at Float Plant	Conditioner	275.00	8.47E-07	1.21E-06	1.73E-07	9.56E-06	3.03E-05
Tank No. 25	Two Propane Tanks at the electric shop 30,000 gallon each	Propane	60,000.00	--	--	--	--	--
Tank No. 26	Propane Tank at the Quarry	Propane	2,000.00	--	--	--	--	--
Tank No. 27	Propane Tank at #6 Oil Building	Propane	1,000.00	--	--	--	--	--
Tank No. 28	Two Propane Tanks at the C&R Shop	Propane	1,000.00	--	--	--	--	--
Tank No. 29	Sodium Hydroxide Tank	Sodium Hydroxide	8,200.00	--	--	--	--	--
Tank No. 30	Sulfuric Acid Tank	Sulfuric Acid	6,000.00	--	--	--	--	--
Tank No. 31	Floculent Tank	Floculent	500.00	--	--	--	--	3.03E-05
Tank No. 32	Anti-foam Tank	Anti-foam	2,500.00	--	--	--	--	3.03E-05
Tank No. 33	Promoter Tank	Promoter	12,000.00	--	--	--	--	3.03E-05

Title V ID	Source Description	Material	Throughput Value (gal)	Emission Rate (tpy) <sup>C</sup>				
				Benzene	Ethylbenzene	n-Hexane	Toluene	VOC
Tank No. 1	Diesel Fuel Tank	Diesel	120,000.00	0.0001	0.0001	0.0000	0.0006	0.0018
Tank No. 2	Used Oil Tank at Maintenance garage	Used Oil	3,300.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 3	Used Oil Tank at Maintenance garage	Used Oil	3,300.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 4	#1 Oil Tank at Maintenance garage	Oil	3,300.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 5	#2 Oil Tank at Maintenance garage	Oil	3,300.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 6	#3 Oil Tank at Maintenance garage	Oil	3,300.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 7	#4 Oil Tank at Maintenance garage	Oil	3,300.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 8	Recycled Oil Tank near Float Plant	Recycled Oil	120,000.00	0.0001	0.0001	0.0000	0.0006	0.0018
Tank No. 11	Kerosene Tank at C & R Shop	Kerosene	3,300.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 12	Gasoline Tank at Office Building	Gasoline	12,000.00	0.0000	0.0000	0.0000	0.0001	0.0002
Tank No. 13	Lube Oil Tank at Scondary Crusher	Lube Oil	3,600.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 16	Recycled Oil	Recycled Oil	360,000.00	0.0002	0.0002	0.0000	0.0017	0.0055
Tank No. 17	Recycled Oil	Recycled Oil	360,000.00	0.0002	0.0002	0.0000	0.0017	0.0055
Tank No. 24	Petroleum Sulfonate (Conditioner) Tank at Float Plant	Conditioner	3,300.00	0.0000	0.0000	0.0000	0.0000	0.0001
Tank No. 25	Two Propane Tanks at the electric shop 30,000 gallon each	Propane	720,000.00	--	--	--	--	--
Tank No. 26	Propane Tank at the Quarry	Propane	24,000.00	--	--	--	--	--
Tank No. 27	Propane Tank at #6 Oil Building	Propane	12,000.00	--	--	--	--	--
Tank No. 28	Two Propane Tanks at the C&R Shop	Propane	12,000.00	--	--	--	--	--
Tank No. 29	Sodium Hydroxide Tank	Sodium Hydroxide	98,400.00	--	--	--	--	--
Tank No. 30	Sulfuric Acid Tank	Sulfuric Acid	72,000.00	--	--	--	--	--
Tank No. 31	Floculent Tank	Floculent	6,600.00	--	--	--	--	0.0001
Tank No. 32	Anti-foam Tank	Anti-foam	30,000.00	--	--	--	--	0.0005
Tank No. 33	Promoter Tank	Promoter	144,000.00	--	--	--	--	0.0022
<b>Total</b>				<b>0.0004</b>	<b>0.0006</b>	<b>0.0001</b>	<b>0.0048</b>	<b>0.0179</b>

A. Throughput based on 1 turnover per month per tank.  
 B. Emission factors from *Emission Factors for Tanks* table for each tank.  
 C. Emission Rate (tpy) = Emission Factor (lb/gal) \* Fuel Throughput (gal/year) \* (1 ton / 2,000 lb)

Tank No. 1 Diesel Fuel Tank Benzene Emission Rate (tpy)=

0.00000085 lb/gal	120,000.0 gal	1 ton 2,000 lb	=	0.0001 tpy
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**Company Name:**

U.S. Silica

**Site Name:**

Berkeley Springs Plant

**Project:**

Potential to Emit Calculations

**Summary of Emissions**

Source Type	Annual Emissions (tpy) <sup>A</sup>											
	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	CO	SO <sub>2</sub>	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	VOC	NH <sub>3</sub>	Lead
Baghouse Emissions	108.8828	108.8828	87.1062	-	-	-	-	-	-	-	-	-
Fluid Bed Dryer & Rotary Dryer	95.4800	95.4800	76.3840	-	-	-	-	-	-	-	-	-
Screening and Unground Sanding Processing CF#40	2.8908	2.8908	2.3126	-	-	-	-	-	-	-	-	-
Screening and Unground Sanding Processing CF#6	10.5120	10.5120	8.4096	-	-	-	-	-	-	-	-	-
Stockpile Emissions	2.4491	1.2245	0.1837	-	-	-	-	-	-	-	-	-
Blasting Emissions	0.1650	0.0858	0.0050	-	-	-	-	-	-	-	-	-
Unpaved Roads Emissions	331.6324	84.5209	8.4521	-	-	-	-	-	-	-	-	-
Permitted Limit Emissions	15.1986	15.1986	12.1589	-	-	-	-	-	-	-	-	-
Combustion Emissions (Total) <sup>B,C</sup>												
Fluid Bed Dryer Combustion Emissions	--	--	--	96.35	13.75	267.00	51380.1156	2.0525	0.4105	1.27	1.7770	0.2104
Fluid Rotary Dryer Combustion Emissions	--	--	--				10302.8330	0.4916	0.0983		0.2337	0.0000
New Limestone System	28.4459	9.5627	0.4358	-	-	-	-	-	-	-	-	-
Material Transfer, Screening, and Crushing Emissions	48.1876	19.7231	5.9534	-	-	-	-	-	-	-	-	-
Tank Emissions	-	-	-	-	-	-	-	-	-	0.0179	-	-
<b>Total</b>	<b>534.9615</b>	<b>239.1984</b>	<b>114.2950</b>	<b>96.3500</b>	<b>13.7500</b>	<b>267.0000</b>	<b>61682.9486</b>	<b>2.5441</b>	<b>0.5088</b>	<b>1.2879</b>	<b>2.0107</b>	<b>0.2104</b>

A. Due to the large number of pollutants, a summary of HAPs emissions from combustion are not presented in this table. Please see table on "EC Combustion-HAPs" and "Tanks" tab for summary of HAP emissions.

B. NOx, CO, SO2, and VOC emissions from combustion sources reference TVOP Emissions Limitations for these sources.

C. Particulate Matter emissions from combustion sources are accounted for in the Fluid Bed Dryer & Rotary Dryer Baghouse Emissions.