



March 8, 2021

Arizona Department of Environmental Quality  
Air Quality Division  
1110 W. Washington St.  
Phoenix, AZ 85007

Subject: Significant Revision Application for Permit #69589, Place ID 2307

To Whom It May Concern:

CEMEX Construction Materials South, LLC is requesting a significant revision for the CEMEX – Prescott Plant, Class II Permit #69589.

Modifications are being made to the existing equipment list and CEMEX would like to request a daily production limitation increase for the crushing and screening operation. We are proposing that the daily concrete batch plant limit be reduced from 5,750 cubic yds/day to 3,000 cubic yds/day in order to increase the crushing and screening operation limit from 5,500 tons/day to 8,700 tons/day. The proposed changes would result in only minor increases in Controlled PM, PM 10 & PM 2.5 by 1.98, 0.84 and 0.10 tons/year, respectively. Uncontrolled PM, PM 10 & PM 2.5 would decrease by 30.92, 15.03 and 2.25 tons/year, respectively.

This packet includes:

1. Signed Standard Permit Application Form
2. Revised Equipment List (changes highlighted in yellow)
3. Revised Emission Calculations
4. Revised Aggregate Process Flow Diagrams

Please feel free to contact me at (602) 228-8029 or via e-mail at [rondeel.storms@cemex.com](mailto:rondeel.storms@cemex.com) if you have any questions or require additional information regarding this submittal.

Respectfully,

Rondee Storms  
Environmental Manager

Enclosed: Signed Standard Permit Application Form  
Revised Equipment List  
Revised Emission Calculations  
Revised Aggregate Process Flow Diagrams



I will assume responsibility for the construction, modification, or operation of the source in accordance with Arizona Administrative Code, Title 18, Chapter 2 and any permit issued thereof.

Signature of Responsible Official: Rondee Storms

Digitally signed by Rondee Storms  
DN: cn=Rondee Storms, o=CEMEX Construction Materials South, LLC,  
ou=Environmental Manager, email=rondeestorms@cemex.com, c=US  
Date: 2021.03.08 09:40:27 -0700

Printed Name of Signer/Official Title: Rondee Storms / Environmental Manager

Date: 3/4/2021 Telephone Number: (602) 228-8029



***EQUIPMENT LIST***

Equipment	Capacity	Make	Model	ID No./ Serial No.	Year of Manufacture	NSPS/NESHAP Applicability
<b>CONCRETE BATCH PLANT</b>						
Concrete Batch Plant	240 cu yds/hr	CON-E-CO	LSA012	C9304 34-6005	2006	NA
Load Out Dust Collector	5800 cfm	CON-E-CO	PJ980	C9304 27-6001	2006	NA
Cement Silo	44tph	CON-E-CO	Unknown	C9304 34-6006	2006	NA
Cement Silo Baghouse	1500 cfm	Con-E-CO	PJC300S	C9304 Unknown	2006	NA
Flyash Silo	13 tph	CON-E-CO	Unknown	C9304 34-6007	2006	NA
Flyash Silo Baghouse	1000 cfm	CON-E-CO	PJC300S	C9304 Unknown	2006	NA
Conveyor #1 3/4 Rock	328 tph	Reuter	30" x 90"	3090-0506-1 29-6043	2006	NA
Conveyor #2 Sand	328 tph	Reuter	30" x 90"	3090-0506-2 29-6046	2006	NA
Conveyor #3 1/2" Rock	328 tph	Reuter	30" x 90"	3090-0506-3 29-6045	2006	NA
Conveyor #4 3/8" Rock	328 tph	Reuter	30" x 90"	3090-0506-4 29-6044	2006	NA
Conveyor #5 Specialty Rock	TBD	TBD	TBD	TBD	TBD	NA
Feeder Bin 1	328 tph	Reuter	12'x 14'	Unknown 30-6030	2006	NA
Feeder Bin 2	328 tph	Reuter	12'x 14'	Unknown 30-6031	2006	NA

***EQUIPMENT LIST***

<b>Equipment</b>	<b>Capacity</b>	<b>Make</b>	<b>Model</b>	<b>ID No./ Serial No.</b>	<b>Year of Manufacture</b>	<b>NSPS/NESHAP Applicability</b>
Feeder Bin 3	328 tph	Reuter	12' x 14'	Unknown 30-6032	2006	NA
Feeder Bin 4	328 tph	Reuter	12' x 14'	Unknown 30-6033	2006	NA
Feeder Bin 5	TBD	TBD	TBD	TBD	TBD	NA
Propane Hot Water Heater	2.2 MMBtu/hr	Power Flame	CR2-G-15	Unknown 81558349	Unknown	NA
<b>CRUSHING AND SCREENING PLANT</b>						
Hydraulic Hammer	N/A	BTI	NT20S	2007092	2007	OOO
Vibratory Feeder	400 tph	Lippman	62" x 20'	931134	1993	OOO
Jaw Crusher	400 tph	Lippman	3062	931133	1973	OOO
Conveyors (2)	36" x 30'	Reuter	N/A	3630-0816-1 3630-0816-2	2016	OOO
Conveyors	36" x 60'	Reuter	N/A	3660-0816-3	2016	OOO
Conveyor	36" x 60'	Reuter	N/A	3660-1098-10	1999	OOO
Conveyor	36" x 60'	Reuter	N/A	3660-1098-6	1999	OOO
Electro Magnet	N/A	Eriez	7535	N/A	2006	N/A
Conveyor	42" x 70'	Reuter	N/A	42700100	1999	OOOO

***EQUIPMENT LIST***

<b>Equipment</b>	<b>Capacity</b>	<b>Make</b>	<b>Model</b>	<b>ID No./ Serial No.</b>	<b>Year of Manufacture</b>	<b>NSPS/NESHAP Applicability</b>
Thermo Belt Scales	N/A	Ramsey	N/A	N/A	2005	N/A
Conveyor	30" x 30'	Reuter	N/A	3030-0100-2	1999	OOO
Conveyor	30" x 30'	Reuter	N/A	3030-0499-5	1999	OOO
Conveyor	30" x 30'	Reuter	N/A	42439	1999	OOO
Conveyor	30" x 60'	Helmic	N/A	9-30-7750-AA	Unknown	OOO
Sand Feeder	6' x 10'	N/A	1170045	84-088-1	Unknown	NA
Lime Silo	50 Tons	Ross	Split	BCM4 10021102	1992	OOO
Stacker	30" x 95'	Superior	N/A	3413	1999	OOO
Conveyor	30" x 60'	Reuter	N/A	3660-0699-5	1999	OOO
3 – Deck Screen	250 tph	Cedarapids	5' x 16'	46064 10021882	1999	OOO
Cone Crusher	400 tph	JCI	1400LS	96C01J1400 10021970	1996	OOO
Stacker	30" x 30'	Reuter	N/A	3030-499-1	1999	OOO
Stacker	30" x 95'	Superior	N/A	3426	1999	OOO
Conveyor	30" x 30'	Reuter	N/A	3030-100-1	1999	OOO

***EQUIPMENT LIST***

<b>Equipment</b>	<b>Capacity</b>	<b>Make</b>	<b>Model</b>	<b>ID No./ Serial No.</b>	<b>Year of Manufacture</b>	<b>NSPS/NESHAP Applicability</b>
Conveyor	30" x 60'	Reuter	N/A	3060-1298-3	1999	OOO
VSI Crusher / Feed Belt	225 tph	Remco	9000	90SO496-174 10022026	1997	OOO
Feed Bin/Belt	30" x 70'	N/A	N/A	N/A	N/A	OOO
Water Tank	8,000 gal	Unknown	Unknown	Unknown	Unknown	NA
Conveyor	30" x 60'	Reuter	N/A	3060-0100-3	1999	OOO
3-Deck Screen	400 tph	JCI	7' x 20'	991558 1060863	1994	OOO
Conveyor	30" x 30'	Reuter	N/A	3030-0100-3	1999	OOO
Stacker	30" x 70'	Helmic	N/A	9-24-7385-AA	Unknown	OOO
Stacker	30" x 30'	Reuter	N/A	3660-1098-7	1999	OOO
Underscreen Belt	N/A	N/A	N/A	N/A	N/A	OOO
Under VSI Belt	7' x 20"	N/A	N/A	N/A	N/A	OOO
Conveyor	30" x 60'	Reuter	N/A	3660-1298-2	1999	OOO
Conveyor	30" x 30'	Helmic	N/A	9-30-8029-AA	Unknown	OOO
Conveyor	30" x 60'	Reuter	N/A	3060-1298-3	1999	OOO
Stacker	30" x 95'	Superior	N/A	3616	1999	OOO



***EQUIPMENT LIST***

Equipment	Capacity	Make	Model	ID No./ Serial No.	Year of Manufacture	NSPS/NESHAP Applicability
Wash Plant						
Wash Plant Feed Bin	25 Tons	N/A	5' x 10'	N/A	N/A	N/A
Wash Plant Sand Screw	44" x 32'	Kolberg	5044-325	405971	2005	N/A
Wash Plant Stacker	30" x 70'	Helmic	N/A	9-246972-AA	Unknown	OOO
Conveyor 3/8" Stacker	30"x60'	Homemade	N/A	84205	Unknown	
Conveyor 1" Rock Stacker	30" x 60'	Homemade	N/A	UM30x401341	Unknown	
Conveyor 1/2" Rock Stacker	30" x 60'	Homemade	N/A	84202	Unknown	
Rip Rap Plant						
Diesel Pit Generator	151 HP	CAT	3304B SR4	AB06543 10019706	1999	ZZZZ
Vibratory Double Grizzly Feeder	400 tph	Lippman	VGf 62 44	2006-06101	2006	OOO
Conveyor	30" x 60'	Helmic	N/A	9-30-7752-AA	Unknown	OOO

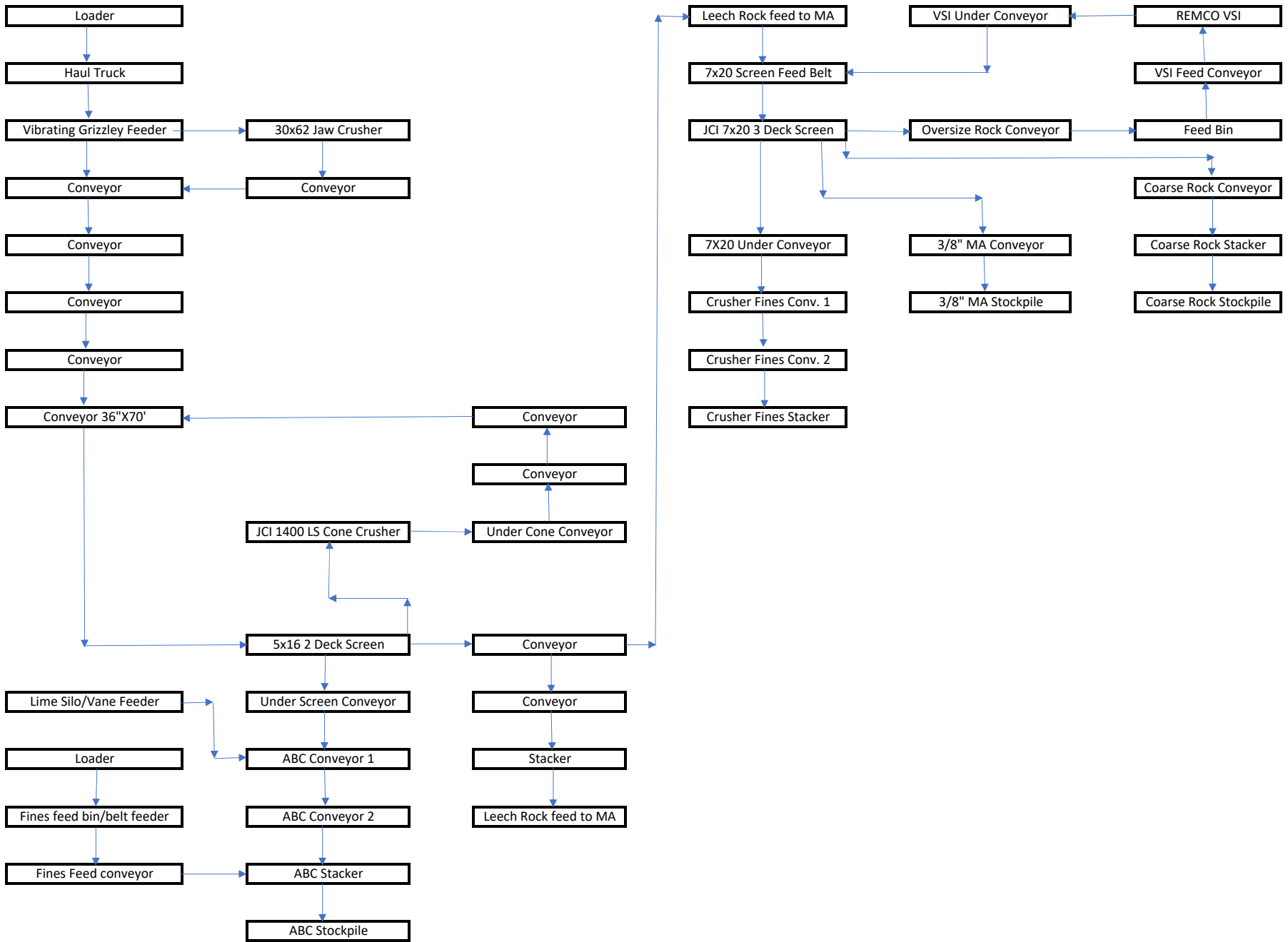
CEMEX Construction Materials South, LLC  
CEMEX – Prescott Plant

PERMIT # 69589  
PLACE ID #2307

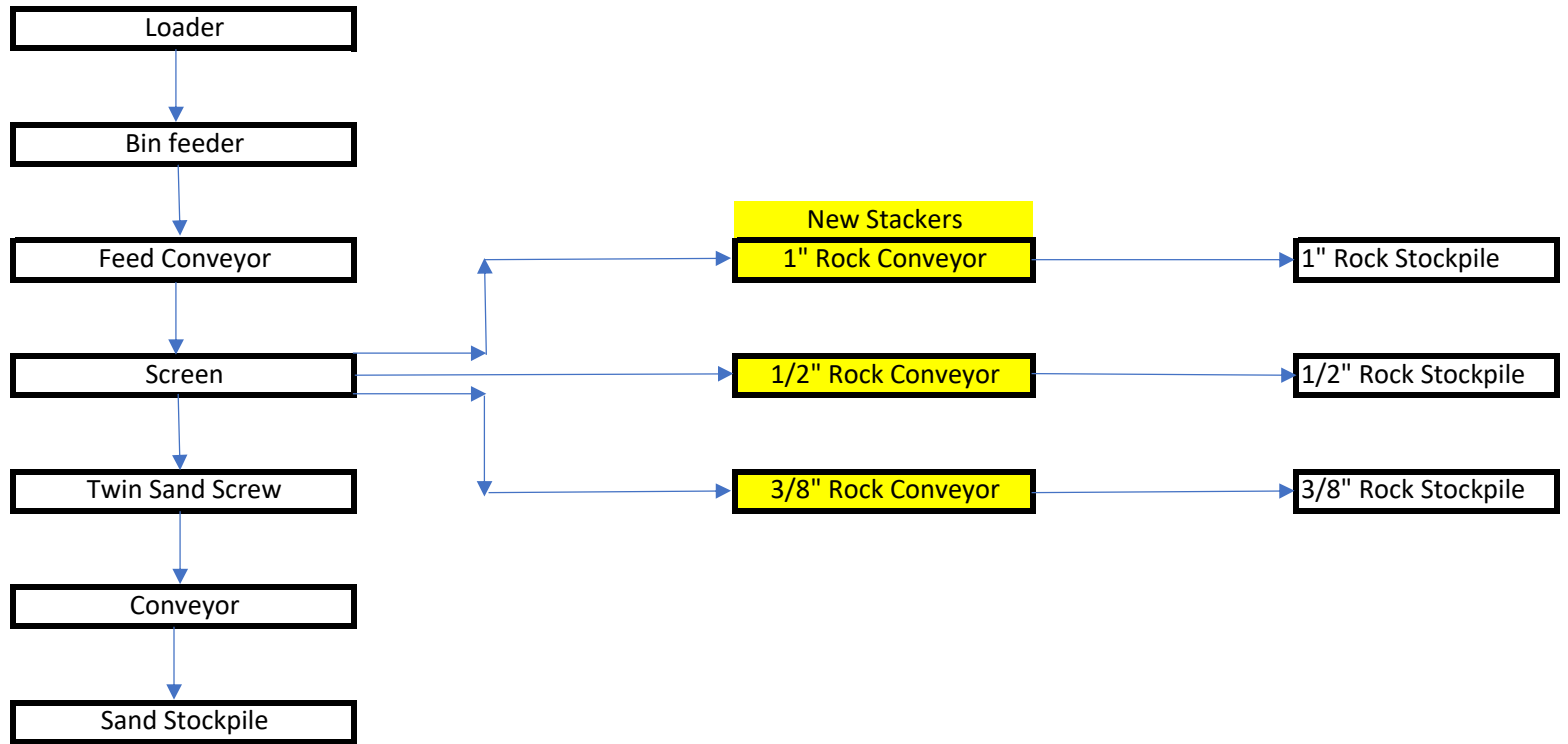
*EQUIPMENT LIST*

Equipment	Capacity	Make	Model	ID No./ Serial No.	Year of Manufacture	NSPS/NESHAP Applicability

Crusher flow diagram



Wash Plant flow diagram



Capacity limit 8700

Table 8 - C & S Controlled Emissions

Name	Activity	Type	Number	Capacity		Emission Factors (Uncontrolled)			Emission Factors (Controlled)			Emissions (Uncontrolled)			Emissions (Controlled)					
				Capacity limit (tonn per day)	(ton/hr)	Max Daily capacity (tpd)	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	PM	PM <sub>10</sub>	PM <sub>2.5</sub>		
				(tonn per day)	(ton/hr)	(tpd)	(t/ton)	(t/ton)	(t/ton)	(t/ton)	(t/ton)	(t/ton)	(t/day)	(t/day)	(t/day)	(t/day)	(t/day)	(t/day)		
Run of mine storage pile <sup>2</sup>	Drop <sup>1</sup>		1	0	0	0	4.78E-03	2.29E-03	3.41E-04	1.11E-03	5.28E-04	7.97E-05	0.00	0.00	0.00	0.00	0.00	0.00		
Run of mine storage pile <sup>2</sup>	Drop <sup>1</sup>		1	0	0	0	4.78E-03	2.29E-03	3.41E-04	1.11E-03	5.28E-04	7.97E-05	0.00	0.00	0.00	0.00	0.00	0.00		
Feed Hopper	Drop <sup>1</sup>		1	8700	400	9600	4.78E-03	2.29E-03	3.41E-04	1.11E-03	5.28E-04	7.97E-05	41.41	19.59	2.97	9.69	4.58	0.69		
Feed Hopper	Drop <sup>1</sup>		1	0	0	0	4.78E-03	2.29E-03	3.41E-04	1.11E-03	5.28E-04	7.97E-05	0.00	0.00	0.00	0.00	0.00	0.00		
Crusher	Crush <sup>1</sup>		1	8700	400	9600	5.40E-03	2.40E-03	3.60E-04	1.20E-03	5.40E-04	1.00E-04	46.98	20.88	3.13	10.44	4.70	0.87		
Crusher	Crush <sup>1</sup>		1	8700	400	9600	5.40E-03	2.40E-03	3.60E-04	1.20E-03	5.40E-04	1.00E-04	46.98	20.88	3.13	10.44	4.70	0.87		
Crusher	Crush <sup>1</sup>		1	5400	225	5400	5.40E-03	2.40E-03	3.60E-04	1.20E-03	5.40E-04	1.00E-04	29.16	12.98	1.94	6.48	2.92	0.54		
Screen	Screen <sup>1</sup>		1	8700	400	9600	2.50E-02	8.70E-03	1.31E-03	2.20E-03	7.40E-04	5.00E-05	217.50	75.69	11.35	19.14	6.44	0.44		
Screen	Screen <sup>1</sup>		1	6000	250	6000	2.50E-02	8.70E-03	1.31E-03	2.20E-03	7.40E-04	5.00E-05	150.00	52.20	7.83	13.20	4.44	0.30		
Fine Screen	Screen <sup>1</sup>		1	0	0	0	3.00E-01	7.93E-03	1.08E-03	3.80E-03	2.93E-03	1.11E-04	0.00	0.00	0.00	0.00	0.00	0.00		
Stackers	Transfer <sup>1</sup>		2	8700	400	9600	4.78E-03	2.29E-03	3.41E-04	1.11E-03	5.28E-04	7.97E-05	41.41	19.59	2.97	9.68	4.58	0.69		
Stackers	Transfer <sup>1</sup>		3	6000	250	6000	4.78E-03	2.29E-03	3.41E-04	1.11E-03	5.28E-04	7.97E-05	29.96	13.91	2.05	6.67	3.16	0.48		
Transfer points	Conveyor TP <sup>2</sup>		10	8700	400	9600	3.00E-03	1.10E-03	1.65E-04	1.40E-04	4.60E-05	1.30E-05	26.10	9.57	1.44	1.22	0.40	0.11		
Transfer points	Conveyor TP <sup>2</sup>		9	6000	250	6000	3.00E-03	1.10E-03	1.65E-04	1.40E-04	4.60E-05	1.30E-05	18.00	6.60	0.99	0.84	0.28	0.08		
Transfer points	Conveyor TP <sup>2</sup>		1	0	0	0	3.00E-03	1.10E-03	1.65E-04	1.40E-04	4.60E-05	1.30E-05	0.00	0.00	0.00	0.00	0.00	0.00		
												646.10	251.48	37.79	87.78	36.18	5.07			

Note 1: Batch Drop Operations and transfer operations to feed hopper, elevated bins and weigh hoppers based on AP-42, 13.2.4.3 Predictive Emission Factor Equation  
Uncontrolled Emissions

Assumptions  
Wind speed, U 7.5 miles/hr  
Moisture, M 1.77 %

Pollutant	k	U	M	Uncontrolled emissions	
				Emission factor	t/ton of aggregate
PM	0.74	7.5	1.77	0.0048	
PM <sub>10</sub>	0.35	7.5	1.77	0.0023	
PM <sub>2.5</sub>	0.053	7.5	1.77	0.0003	

For controlled emissions

Assumptions  
Wind speed, U 7.5 miles/hr  
Moisture, M 5 %

Pollutant	k	U	M	Controlled emissions	
				Emission factor	t/ton of aggregate
PM	0.74	7.5	5	1.11E-03	
PM <sub>10</sub>	0.35	7.5	5	5.28E-04	
PM <sub>2.5</sub>	0.053	7.5	5	7.97E-05	

Note 2: Crushing, screening and conveyor transfer points emissions are taken from AP-42, Table 11.19.2-2. Wherever PM2.5 emission factors are not available, these are taken as 15% of PM10 emission factors

Note 3: Fine Screening Controlled emission factor estimation  
Fine screening PM2.5 is interpolated as shown below.

Activity	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	
			as % of PM	as % of PM <sub>10</sub>
lines crushing	0.003	0.0012	0.0007	2.33%
screening	0.0022	0.00074	0.00005	2.27%
lines screening	0.0036	0.0022	no data	interpolated*

Interpolation:  
Average of 2.33% and 2.27 % = 2.30%  
2.30% \* fine screen PM of = 8.28E-05  
Average of 5.63% and 6.76 % = 6.30%  
6.30% \* fine screen PM<sub>10</sub> of = 1.38E-04  
Average of two interpolated values = 1.11E-04  
values from PM & PM10

Uncontrolled (t/yr) 117.9 45.9 6.9 16.0 6.6 0.9  
Controlled (t/yr) 86.7 33.6 5.1 11.6 4.8 0.7  
Previous Renewal Change 31.2 12.3 1.8 4.4 1.8 0.3

Emissions (Uncontrolled)			Emissions (Controlled)		
PM	PM <sub>10</sub>	PM <sub>2.5</sub>	PM	PM <sub>10</sub>	PM <sub>2.5</sub>
475.1	184.3	27.7	63.8	26.2	3.6

69162 CEMEX YUMA HWY 95 Plant

Feed Amounts for Concrete Batch Plants for 1 Cubic yard of concrete		
Feed Type for Batch Plant	Pounds	Tons
Course Aggregate	1855	0.8325
Sand	1428	0.714
Cement	491	0.2455
Cement Supplement	73	0.0365
Water	167	0.0835
Total for 1 Cubic yard of concrete	4024	2.012

Not used in calculation - no emissions

Capacity of CBP 3000 cubic yards per day  
125.00 cubic yards per hour

**Table 6**

Reference Items	Source Description	Unit Operation Maximum Capacity tons/hour	Emission Factor - Uncontrolled <sup>1</sup>			Emission Factor - Controlled			Uncontrolled Emissions			Controlled Emission		
			PM	PM <sub>10</sub>	PM <sub>2.5</sub> <sup>2</sup>	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	PM	PM <sub>10</sub>	PM <sub>2.5</sub>
			lb/ton			lb/ton			lb/hr			lb/hr		
1	Aggregate Delivery to ground storage	116.56	0.0069	0.0033	0.000495	1.11E-03	5.26E-04	7.97E-05	0.80	0.38	0.06	1.30E-01	6.13E-02	9.29E-03
2	Sand delivery to ground storage <sup>3</sup>	89.25	0.0021	0.00099	0.0001485	1.11E-03	5.26E-04	7.97E-05	0.19	0.09	0.01	9.93E-02	4.69E-02	7.11E-03
3	Aggregate transfer to conveyor	116.56	0.0069	0.0033	0.000495	1.11E-03	5.26E-04	7.97E-05	0.80	0.38	0.06	1.30E-01	6.13E-02	9.29E-03
4	Sand transfer to conveyor	89.25	0.0021	0.00099	0.0001485	1.11E-03	5.26E-04	7.97E-05	0.19	0.09	0.01	9.93E-02	4.69E-02	7.11E-03
5	Aggregate transfer to elevated storage	116.56	0.0069	0.0033	0.000495	1.11E-03	5.26E-04	7.97E-05	0.80	0.38	0.06	1.30E-01	6.13E-02	9.29E-03
6	Sand transfer to elevated storage	89.25	0.0021	0.00099	0.0001485	1.11E-03	5.26E-04	7.97E-05	0.19	0.09	0.01	9.93E-02	4.69E-02	7.11E-03
7	Cement delivery to Silo	30.69	0.73	0.47	0.0705	0.00099	0.00034	0.00051	22.40	14.42	2.16	3.04E-02	1.04E-02	1.57E-03
8	Cement supplement transfer to Silo	4.56	3.14	1.1	0.165	0.0089	0.0049	0.000735	14.33	5.02	0.75	4.08E-02	2.24E-02	3.35E-03
9	Weigh hopper loading	205.81	0.0048	0.0028	0.00042	0.00048	0.00024	0.000036	0.99	0.58	0.09	9.88E-02	4.94E-02	7.41E-03
10	Central Mx loading	35.25	0.572	0.156	0.0234	0.0184	0.0055	0.000625	20.16	5.50	0.82	6.49E-01	1.94E-01	2.91E-02
	Total								60.85	28.94	4.04	1.5051	0.60	0.09

**Notes for Uncontrolled emission factors**

- PM and PM10 factors fare from Table 11.12-2, AP-42, Fifth Edition; Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources.
- PM<sub>2.5</sub> emissions are taken as 15% of PM<sub>10</sub>.
- PM and PM10 factors for for Items 7 through 10 are from Table 11.12-2, AP-42, Fifth Edition; Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources.
- For items 7 through 10, PM<sub>2.5</sub> emissions are taken as 15% of PM<sub>10</sub>.
- Batch and continuous drop operations (Items 1 through 6) - controlled PM, PM10 and PM2.5 emissions are calculated as below:  
AP-42, 13.2.4.3 Predictive Emission Factor Equation  $k \times 10^{-0.032} / (U \times 1.3) / (M \times 2)^{1.4}$

**Assumptions**

Wind speed, U 7.5 miles/hr  
Moisture, M 5 % For controlled emissions

Pollutant	k	U	M	Emission factor lb/ton of aggregate
PM	0.74	7.5	5	1.11E-03
PM <sub>10</sub>	0.35	7.5	5	5.26E-04
PM <sub>2.5</sub>	0.053	7.5	5	7.97E-05

**Emissions from a 2.2 MMBtu/hr Propane Boiler**

**Table 7**

Pollutant	2.2 MMBtu/hr	
	Propane Emission Factors lb/MMBtu	Emissions lb/hr Tons/year
PM	7.65E-03	0.0168 0.0737154
PM <sub>10</sub>	7.65E-03	0.0168 0.0737154
PM <sub>2.5</sub>	7.65E-03	0.0168 0.0737154
CO	8.20E-02	0.1804 0.790152
NO <sub>x</sub>	1.42E-01	0.3124 1.368312
SO <sub>2</sub>	0.00E+00	0.0000 0
VOCs	1.09E-02	0.0240 0.1050324

Emission factors from AP-42, Section 1.5, Table 1.5-1

**Emission Factor  
LPG/Propane Boilers  
Pounds per MMBtu**

	b
PM	7.65E-03
PM <sub>10</sub>	7.65E-03
CO	8.20E-02
NO <sub>x</sub>	1.42E-01
SO <sub>2</sub>	0.00E+00
VOCs	1.09E-02

**Unpaved Roads**

**Table-9**

Emissions	VMT/HR	PM		PM <sub>10</sub>		PM <sub>2.5</sub>	
		lb/VMT	lb/hr	lb/VMT	lb/hr	lb/VMT	lb/hr
Unpaved roads loaders	3	0.67	2.01	0.167	0.501	0.02	0.06
Unpaved roads trucks and other traffic	1	0.67	0.67	0.167	0.167	0.02	0.02
Total	4		2.68		0.668		0.08

Assumptions

Mean vehical weight	28	tons
s, silt content	4.80	%
p	20	(No of days/year with rain fall at least 0.01 inch)

Emission factors

	k	a	b	Uncontrolled	controlled
				$k(s/12)a(W/3)b/(365-p/365)$	90% control $\eta$
				lb/VMT	lb/VMT
PM	4.9	0.7	0.45	6.66	0.67
PM <sub>10</sub>	1.5	0.9	0.45	1.70	0.17
PM <sub>2.5</sub>	0.15	0.9	0.45	0.17	0.02

**Storage Piles Emissions**

**Table -10**

Storage piles (Acres)	PM		PM <sub>10</sub> (50% of PM)	PM <sub>2.5</sub> (Same as PM <sub>10</sub> )
	EF, Lb/hr-acre	lb/hr	lb/hr	lb/hr
4.25	0.0016	0.0067	0.0033	0.0033

s	Silt content of aggregate	0.17
p	No. of days with 0.01 inch of precipitation per year	20
f	% of time unobstructed wind speed exceeds 5.4 m/sec (12 mph)	20

PM  $1.7*(s/1.5)/((365-p)/235)^{1/4}$  Reference: Air Pollution control manual (1992), Chapter 4

PM emission factor	0.3771 lb/day-acre	0.0157 lb/hr-acre
Controlled PM	0.0377 lb/day-acre	0.0016 lb/hr-acre
1 acre=	43560 sq. ft	

For previous HMA GP, average storage pile was taken as 2,775 ft<sup>2</sup> of surface area which is equal to .064 acres.

Total Fugitives

	lb/hr	tpy
PM	2.69	11.77
PM10	0.67	2.94
PM2.5	0.08	0.37

## Engines

**Table-5**

**Engines**

**>600 HP**

**<600 HP**

Pollutant	Total HP 0		Total HP 151		Total Emissions tpy
	Emission Factor (lb/hp-hr)	Emissions lb/hr	Emission Factor (lb/hp-hr)	Emissions lb/hr	
PM	7.00E-04	0.00	2.20E-03	0.33	1.46
PM <sub>10</sub>	7.00E-04	0.00	2.20E-03	0.33	1.46
PM <sub>2.5</sub>	7.00E-04	0.00	2.20E-03	0.33	1.46
CO	5.50E-03	0.00	6.68E-03	1.01	4.42
NO <sub>x</sub>	2.40E-02	0.00	3.10E-02	4.68	20.50
SO <sub>x</sub>	1.21E-05	0.00	1.21E-05	0.00	0.01
VOCs	7.05E-04	0.00	2.47E-03	0.37	1.63

For > 600 HP engines, emission factors taken from AP-42, Table 3.4.1 For SO<sub>2</sub>, Sulfur content taken as 0.8%.

SO<sub>2</sub> emission based on **ultra low sulfur diesel** S=15 ppm (0.0015%)

Emission factor =             8.09e-3\*S                             0.000012135                     1.21E-05

For < 600 HP engines, emission factors taken from AP-42, Table 3.3.1

SO<sub>2</sub> emission based on **ultra low sulfur diesel** S=15 ppm (0.0015%), factor taken same as in AP-42, Table 3.4-1

PM=PM<sub>10</sub>=PM<sub>2.5</sub>



CS and CBP TOTAL

**Table 11**  
**CNS Plant Limit 8700 tons per day**  
**CBP Limit 3000 cubic yards per day**

Pollutants	Generators lb/hr	C&S (tpy)		CBP (tpy)		Boiler Uncontrolled ton/yr	Engine Uncontrolled ton/yr	Total Emissions	
		Uncontrolled	Controlled	Uncontrolled	Controlled			Uncontrolled	Controlled
		tpy	tpy	tpy	tpy			tpy	tpy
PM	0.00	117.91	16.02	60.85	1.51	0.074	1.46	180.30	19.05
PM <sub>10</sub>	0.00	45.89	6.60	26.94	0.60	0.074	1.46	74.36	8.73
PM <sub>2.5</sub>	0.00	6.90	0.93	4.04	0.09	0.074	1.46	12.47	2.54
CO	0.00					0.790	4.42	5.21	5.21
NO <sub>x</sub>	0.00					1.368	20.50	21.87	21.87
SO <sub>2</sub>	0.00					0.000	0.01	0.01	0.01
VOC	0.00					0.105	1.63	1.74	1.74

Change in Uncontrolled	Change in Controlled	Percentage Change	Percentage Change
tpy	tpy	Uncontrolled	Controlled
-24.78	3.00	-14%	15.73%
-12.53	1.27	-17%	14.56%
-1.87	0.18	-15%	6.93%
0.00	0.00	0%	0.00%
0.00	0.00	0%	0.00%
0.00	0.00	0%	0.00%
0.00	0.00	0%	0.00%

From Renewal Permit - Updated with CNS throughput limits

Pollutants	Generators lb/hr	C&S (tpy)		CBP (tpy)		Boiler Uncontrolled ton/yr	Engine Uncontrolled ton/yr	Total Emissions	
		Uncontrolled	Controlled	Uncontrolled	Controlled			Uncontrolled	Controlled
		tpy	tpy	tpy	tpy			tpy	tpy
PM	0	86.70	11.64	116.84	2.89	0.07	1.46	205.07	16.06
PM <sub>10</sub>	0	33.64	4.78	51.72	1.15	0.07	1.46	86.88	7.46
PM <sub>2.5</sub>	0	5.06	0.67	7.76	0.17	0.07	1.46	14.34	2.37
CO	0					0.79	4.42	5.21	5.21
NO <sub>x</sub>	0					1.37	20.50	21.87	21.87
SO <sub>2</sub>	0					0.00	0.01	0.01	0.01
VOC	0					0.11	1.63	1.74	1.74