CEMEX

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AIR QUALITY DEPARTMENT

990542 -
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June 30, 2015

MCAQD One Stop Shop
Permit Application Intake
1001 N Central Ave, Suite 125
Phoenix, AZ 85004

Subject: **Submittal of Non-Title V Renewal Application**
CEMEX – West Valley Plant
MCAQD Permit #990542
CEMEX Construction Materials South, LLC
Maricopa County

To Whom It May Concern:

CEMEX Construction Materials South, LLC – West Valley Plant (CEMEX) is submitting the Non-Title V renewal application for MCAQD Permit #990542. Please note that the submittal of a permit modification is not applicable at this time since none of the items specified in Sections 2-5 apply.

Should you require any additional information on this submittal or any other matter regarding this facility or any other CEMEX facilities located in Maricopa County please feel free to contact me at (602) 416-2684 or shaunah.haranczak@cemex.com.

Respectfully,
CEMEX Construction Materials South, LLC

Shauna Haranczak,
Environmental Manager
Arizona/S. Nevada

cc: File

Deliver or Mail all Applications to:
MCAQD Permit Application Intake
1001 N Central Avenue, Suite 125
Phoenix AZ 85004
http://www.maricopa.gov/aq/

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RECEIVED
JUN 30 2015
MARICOPA COUNTY
AIR QUALITY DEPARTMENT

RENEWAL APPLICATION FOR NON-TITLE V AIR QUALITY PERMIT

(As required by A.R.S. §49-480 and Maricopa County Air Pollution Control Regulations, Rule 200)

RENEWAL APPLICATIONS MUST BE SUBMITTED AT LEAST SIX MONTHS, BUT NOT MORE THAN 18 MONTHS, PRIOR TO THE DATE OF PERMIT EXPIRATION.

1. EXISTING PERMIT NUMBER: 990542	PERMIT EXPIRATION DATE: 07/31/2016		
2. WILL THERE BE ANY CHANGES TO THE OPERATING SCENARIO(S) FROM THAT DEFINED IN THE EXISTING PERMIT?	YES ☐	NO ☒	IF **YES**, SUBMIT A MODIFICATION APPLICATION (**IN ADDITION TO THIS RENEWAL APPLICATION**). REFER TO INSTRUCTIONS TO DETERMINE WHETHER A MINOR MODIFICATION OR NON MINOR MODIFICATION IS NEEDED.
3. WILL THERE BE ANY NEW, MODIFIED, OR RECONSTRUCTED STATIONARY SOURCES OR AIR POLLUTION CONTROL EQUIPMENT FROM THAT DEFINED IN THE EXISTING PERMIT?	YES ☐	NO ☒	
4. ARE THERE ANY EMISSIONS PRESENT THAT HAVE NOT BEEN CORRECTLY IDENTIFIED AND DEFINED IN THE CURRENT PERMIT?	YES ☐	NO ☒	
5. WILL THERE BE ANY CHANGES THAT TRIGGER ANY OTHER NEW APPLICABLE REQUIREMENTS?	YES ☐	NO ☒	
6. HAS THE OWNERSHIP OF THIS FACILITY CHANGED SINCE THE PERMIT WAS LAST ISSUED OR TRANSFERRED?	YES ☐	NO ☒	IF **YES**, SUBMIT PERMIT TRANSFER APPLICATION.

7. BUSINESS NAME (as filed with the Arizona Corporation Commission):	CEMEX Construction Materials South, LLC		
8. ADDRESS OF SITE:	11550 W Northern Ave		
CITY:	Glendale	STATE: AZ	85307
9. CONTACT PERSON AT SITE:	Jeff Hake	a. TELEPHONE:	(602) 446-0309
		b. ALT. TEL:	N/A
10. NAME AND ADDRESS OF OWNERSHIP OR LEGAL ENTITY:	CEMEX Construction Materials South, LLC 5555 E Van Buren St Suite 155 Phoenix, AZ 85008		
11. OWNERSHIP CONTACT:	CEMEX Construction Materials South, LLC	a. TELEPHONE:	(602) 416-2600
		b. FAX:	(602) 416-2972
12. SEND ALL CORRESPONDENCE INCLUDING INVOICE AND PERMIT TO:	COMPANY NAME: CEMEX Construction Materials South, LLC		
	ADDRESS: 5555 E Van Buren St Suite 155		
	CITY: Phoenix	STATE: AZ	ZIP CODE: 85008
	ATTN: Shauna Haranczak		

13. THE AUTHORIZED CONTACT PERSON REGARDING THIS APPLICATION IS:

NAME: Shauna Haranczak TELEPHONE: (602) 416-2684

TITLE: Environmental Manager FAX: (602) 416-2672

COMPANY: CEMEX Construction Materials South, LLC E-MAIL: shaunah.haranczak@cemex.com

14. I CERTIFY THAT I AM FAMILIAR WITH THE OPERATIONS REPRESENTED ON THIS APPLICATION AND THE INFORMATION PROVIDED HEREIN IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

SIGNATURE OF OWNER OR RESPONSIBLE OFFICIAL OF BUSINESS: Agustin Figueroa DATE: 06/30/2015

TYPE OR PRINT NAME AND TITLE: Agustin Figueroa, Environmental Director

California Environmental Protection Agency AIR RESOURCES BOARD	PERKINS ENGINES COMPANY LTD.	EXECUTIVE ORDER U-R-022-0084 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2006	6PKXL06.6PJ1	6.6	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Turbocharger, Charge Air Cooler and Engine Control Module	Crane, Tractor, Pump and Generator

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
75 ≤ KW < 130	Tier 2	STD	N/A	N/A	6.6	5.0	0.30	20	15	50
130 ≤ KW < 225	Tier 3	STD	N/A	N/A	4.0	3.5	0.20	20	15	50
		CERT	--	--	3.6	1.8	0.15	16	11	21

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 11TH day of January 2006.

Allen Lyons, Chief
Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: **Perkins Engines Co. Ltd.**

Engine category: **Nonroad CI**

EPA Engine Family:

Mfr Family Name:

Process Code: **Running Change**

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
1	2636/2200	249@2200	130	94.0	774	154	70.9	ECM DDI TAA
2	2640/2200	237@2200	124	89.7	701	146	72.0	ECM DDI TAA
3	2642/2200	275@2200	141	102.0	702	144	66.3	ECM DDI TAA
4	2478/2200	225@2200	119	86.1	725	146	67.2	ECM DDI TAA
5	2544/2500	174@2500	88	72.3	513	112	55.2	ECM DDI TAA
6	2548/2200	188@2200	130	94.0	656	150	69.0	ECM DDI TAA
7	2550/2200	182@2200	95	68.7	592	115	52.9	ECM DDI TAA
8	2554/2200	213@2200	110	79.6	687	137	63.1	ECM DDI TAA
9	2558/2200	196@2200	105	76.0	643	132	60.8	ECM DDI TAA
10	2596/2000	231@2000	130	86.0	693	140	64.4	ECM DDI TAA
11	2674/2000	171@2000	99	65.1	630	132	60.8	ECM DDI TAA
12	2784/2000	177@2000	101	66.4	646	131	60.3	ECM DDI TAA
13	2788/2000	197@2000	112	73.7	723	150	69.0	ECM DDI TAA
14	2884/2100	172@2100	130	89.8	653	150	69.0	ECM DDI TAA
15	2886/2100	194@2100	107	73.9	653	136	62.6	ECM DDI TAA
16	3036/1800	209@1800	130	76.9	591	150	69.0	ECM DDI TAA
17	3002/2200	173@2200	94	68.0	413	123	56.6	ECM DDI TAA
18	2552/2200	193@2200	102	73.8	461	128	59.0	ECM DDI TAA
19	3004/2200	185@2200	103	74.3	442	125	57.4	ECM DDI TAA
20	3006/2200	203@2200	106	17.9	485	137	63.1	ECM DDI TAA
21	3052/2200	189@2500	130	94.0	398	150	74.0	ECM DDI TAA

Engine Model Summary Form

Manufacturer: **Perkins Engines Co. Ltd.**

Engine category: **Nonroad CI**

EPA Engine Family:

Mfr Family Name: 6PKXL06.6PJ1

Process Code: **Running Change**

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
1	2660/1800	174@1800	110	65.1	631	132	60.8	ECM DDI TAA
2	2526/2200	122@2200	85	48.9	354	130	59.8	ECM DDI TAA
3	2598/2100	163@2100	91	62.8	489	106	49.0	ECM DDI TAA
4	2536/2200	128@2200	85	61.5	433	130	59.8	ECM DDI TAA
5	2540/2200	156@2200	86	62.5	504	110	50.6	ECM DDI TAA
6	2952/2200	174@2100	91	62.8	513	109	50.2	ECM DDI TAA
7	2656/2000	121@2000	71	49.2	409	90	41.4	ECM DDI TAA
8	2658/2000	131@2000	85	61.5	450	130	59.8	ECM DDI TAA
9	2662/2000	168@2000	99	65.7	524	110	47.0	ECM DDI TAA
10	2664/1800	166@1800	104	61.8	579	123	56.6	ECM DDI TAA
11	2666/2000	173@2000	98	66.7	553	109	50.2	ECM DDI TAA
12	2714/2100	131@2100	85	58.7	496	130	59.8	ECM DDI TAA
13	2718/2100	151@2100	86	61.2	547	118	54.3	ECM DDI TAA
14	2772/2000	152@2000	93	61.2	551	119	47.0	ECM DDI TAA
15	2774/2000	147@2000	86	56.6	531	114	45.0	ECM DDI TAA
16	2776/2000	142@2000	85	55.9	511	108	42.6	ECM DDI TAA
17	2778/2000	157@2000	95	62.5	570	121	47.7	ECM DDI TAA
18	2780/2000	162@2000	93	61.2	590	125	49.3	ECM DDI TAA
19	2782/2000	172@2000	99	65.1	627	128	58.9	ECM DDI TAA
20	2786/2000	167@2000	96	63.1	610	129	50.9	ECM DDI TAA
21	2962/2200	131@2000	85	55.9	496 lbf.ft@1400r	130	59.8	ECM DDI TAA
22	2984/2200	119@2200	66	47.8	284	88	40.5	ECM DDI TAA
23	2990/2200	135@2200	74	53.5	321	99	45.6	ECM DDI TAA
24	2994/2200	145@2200	85	61.5	346	130	59.8	ECM DDI TAA
25	2998/2200	161@2200	85	61.5	384	130	59.8	ECM DDI TAA
26	3000/2200	162@2200	85	61.5	387	130	59.8	ECM DDI TAA
27	3038/1800	174@1800	110	65.1	507	132	60.8	ECM DDI TAA

Engine Model Summary Form

Manufacturer: **Perkins Engines Co. Ltd**

Engine category: **Nonroad CI**

EPA Engine Family: **6PKXL06.6PJ1**

Mfr Family Name: **PERKINS 1106D-E66TA AND CATERPILLAR**

Process Code: **Running Change**

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
31	3288/2200	173@2200	94	68	575@1400	123	57	ECM DDI TAA
32	3290/2200	182@2200	95	69	592@1400	115	53	ECM DDI TAA
33	3294/2200	193@2200	102	74	624@1400	128	59	ECM DDI TAA
34	3300/2200	185@2200	103	75	611@1400	125	58	ECM DDI TAA
35	3302/2200	202@2200	106	77	680@1400	137	63	ECM DDI TAA

Engine Model Summary Form

Manufacturer: **Perrkins Engines Co. Ltd,.**

Engine category: **Nonroad CI**

EPA Engine Family: **6PKXL06.6PJ1**

Mfr Family Name:

Process Code: **Running Change**

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
27	2964/1800	274	158.6	94	800@1800	158.6	94	ECM DDI TAA

Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J193
6PKXL06.6PJ1	36	2690/1800	217@1800	127.2	75.3	632@1800	127.2	75.3	ECM DDI TAA
6PKXL06.6PJ1	37	3210/2200	181@2200	100.7	72.8	662@1400	134.6	62	ECM DDI TAA
6PKXL06.6PJ1	38	3214/2000	186@2000	104.6	68.8	682@1400	136.8	63	ECM DDI TAA
6PKXL06.6PJ1	39	3216/2000	191@2000	108.3	71.2	699@1400	138.2	63.6	ECM DDI TAA
6PKXL06.6PJ1	40	3244/2100	175@2100	96.6	63.5	662@1400	140.1	64.5	ECM DDI TAA
6PKXL06.6PJ1	41	3286/2000	171@2000	99	65.1	630@1400	132	60.8	ECM DDI TAA
6PKXL06.6PJ1	42	3292/2200	188@2200	98.7	71.4	656@1400	134.3	61.8	ECM DDI TAA
6PKXL06.6PJ1	43	3296/2200	196@2200	105	76.0	643@1400	132	60.8	ECM DDI TAA
6PKXL06.6PJ1	44	3298/2200	196@2200	105	76.0	643@1400	132	60.8	ECM DDI TAA
6PKXL06.6PJ1	45	3304/2200	213@2200	110	79.6	687@1400	137	63.1	ECM DDI TAA
6PKXL06.6PJ1	46	3306/2000	224@2000	128.1	84.2	730@1300	152.1	65	ECM DDI TAA
6PKXL06.6PJ1	47	3322/2200	225@2200	119	86.1	727@1400	146	67.2	ECM DDI TAA
6PKXL06.6PJ1	48	3318/1800	202@1800	125.9	74.5	680@1400	135.2	62.2	ECM DDI TAA
6PKXL06.6PJ1	49	3324/2200	249@2200	130	94.0	774@1400	154	70.9	ECM DDI TAA
6PKXL06.6PJ1	50	3328/2200	216@2200	119.2	86.2	775@1400	158.8	73.1	ECM DDI TAA

Fugitive Dust Calculation Worksheet

Company: CEMEX - West Valley Plant

Permit: 990542

Hours per day	24	hrs/day
Days per week:	7	days/wk
Weeks per year:	52	wks/yr
	364	days/yr

Lt-duty @15mph	0	VMT/yr
Med-duty @15mph	12,288	VMT/yr
Hvy-duty @15mph	27,352	VMT/yr

Total Plant Capacity:	400	tons/hr
	9600	tons/day
	2,430,000	tons/yr

Dust Emissions from Material Handling

Unless otherwise noted, each emission factor was taken from the MCAQD Emissions Inventory Unit Emission Factors for Sand and Gravel Plants

Non-Fugitive Emissions	Material Throughput		# of Units	Emission Factors (pounds/ton)				Emissions (lbs/hr)		Emissions (lbs/day)		Emissions (lbs/yr)	
				PM-10		PM		PM-10	PM	PM-10	PM	PM-10	PM
Crushing with watering [1]	2,430,000	tons/yr	2	0.00010	1	0.00120	1	0.06	0.96	1.92	23.04	486	5832
Screening with watering [1]	2,430,000	tons/yr	2	0.00035	1	0.00220	1	0.28	1.76	6.72	42.24	1701	10692
Conveyors [1,2]	2,430,000	tons/yr	19	0.000045	1	0.00014	1	0.34	1.06	8.21	25.54	2078	6464
Total:								0.7	3.8	17	91	4,265	22,988

Fugitive Emissions	Material Throughput		# of Units	Emission Factors (pounds/ton except stockpiles which are lb/acre-yr)				Emissions (lbs/hr)		Emissions (lbs/day)		Emissions (lbs/yr)	
				PM-10		PM		PM-10	PM	PM-10	PM	PM-10	PM
Mining/Plant feed, handling	2,430,000	tons/yr	1	0.00055	4	0.00157	5	0.22	0.63	5.28	15.09	1337	3819
Surge Pile forming, handling	2,430,000	tons/yr	1	0.00055	4	0.00157	5	0.22	0.63	5.28	15.09	1337	3819
Pile forming, handling [2]	2,430,000	tons/yr	1	0.00055	4	0.00157	5	0.22	0.63	5.28	15.09	1337	3819
Load out, handling with waterin	2,430,000	tons/yr	1	0.00055	4	0.00157	5	0.22	0.63	5.28	15.09	1337	3819
Load out, handling without wate	0	tons/yr	0	0.00240	4	0.00686	5	0.00	0.00	0.00	0.00	0	0
Stockpiles	3	acre	N/A	63	3	180	3,5	N/A	N/A	0.52	1.48	189	540
Total:								0.9	2.5	21.6	61.8	5535.0	15814.3

Fugitive Emissions From Vehicle Traffic	PM10 EF (lb/VMT)	Control Efficiency	PM10 Emissions (tons/yr)	PM Emissions (tons/yr)[5]
Light Duty Vehicles @15 mph	0.44	90%	0.0	0.0
Medium Duty Vehicles @15 mph	0.86	90%	0.5	1.5
Heavy Duty Vehicles @15 mph	3.2	90%	4.4	12.5

Emissions Summary (excluding fugitives)			
PM10:	16.8	lbs/day	2.1 tons/yr
PM:	90.8	lbs/day	11.5 tons/yr

Emissions Summary (including fugitives)		
PM10:	9.8	tons/yr
PM:	33.4	tons/yr

[1] Reference: U.S. EPA, "Compilation of Air Pollutant Emission Factors: Volume I: Stationary Point and Area Sources" (AP-42), fifth ed. Table 11.19.2-2.
[2] Use 070503 for processes associated with any rock mining or processing. Use 070599 for other processes, such as a sales lot or concrete plant.
[3] The stockpile emission factor above assumes 90% control, assuming regular watering or use of a chemical palliative (dust suppressant).
[4] Reference: MCAQD Helpsheet for Sand and Gravel Plants
[5] PM-10 assumed to be equal to 35% of PM

Diesel Engines Worksheet:

Diesel Industrial Engines Calculation Worksheet

Company: CEMEX - West Valley Plant

Permit: 990542

Diesel Engines

	Capacity	Hrs/day	Hrs/year
1)	250 hp	24	8760
2)			
3)			
4)			
5)			
Total	250 hp		

Manufacturer's Emission Factors
(Perkins Engine is 250 HP and it is a Tier 3 Engine (see attached manufacturer's data sheet)

CO:	3.5	g/kw-hr =	2.625	g/Hp-hr.=	**0.0058**	**lb./hp-hr.**
NOx:	4	g/kw-hr =	3	g/Hp-hr.=	**0.0066**	**lb./hp-hr.**
SOx:	NA	NA	NA	NA	**NA**	**NA**
PM10:	0.2	g/kw-hr =	0.15	g/Hp-hr.=	**0.0003**	**lb./hp-hr.**
VOC:	NA	NA	NA	NA	**NA**	**NA**

Conversion: 1 gram = 0.002205 lbs
1 Hp = 0.75 kW

Emissions

	Daily Emissions[a]	Annual Emissions[b]
CO:	**34.7 lbs/day**	**12,676 lbs/yr**
NOx:	**39.7 lbs/day**	**14,487 lbs/yr**
SOx:	**NA lbs/day**	**NA lbs/yr**
PM10:	**2.0 lbs/day**	**724 lbs/yr**
VOC:	**NA lbs/day**	**NA lbs/yr**

NOTES:
[a] Based on 24 hours per day for 250 hp unit.
[b] Based on 8760 hours per year for 250 hp unit.