



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Table 1(a) Emission Point Summary

Date: 2/11/2015	Permit No.:	Regulated Entity No.:
Area Name: DRIPPING WET CONCRETE		Customer Reference No.:

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this Table.

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate	
(A) EPN	(B) FIN	(C) Name		(A) Pound Per Hour	(B) TPY
EPN1	FIN1	DUST COLLECTOR	PM	0.185	0.404
EPN1	FIN1	DUST COLLECTOR	PM10	0.118	0.144
EPN1	FIN1	DUST COLLECTOR	PM2.5	0.011	0.026
EPN2,3	FIN2,3	MATERIAL HANDLING	PM	3.173	6.931
EPN2,3	FIN2,3	MATERIAL HANDLING	PM10	1,514	3.306
EPN2,3	FIN2,3	MATERIAL HANDLING	PM2.5	0.229	0.501
EPN4	FIN4	STOCKPILES	PM		0.120
EPN4	FIN4	STOCKPILES	PM10		0.60
EPN4	FIN4	STOCKPILES	PM2.5		0.009

EPN = Emission Point Number

FIN = Facility Identification Number

TCEQ - 10153 (Revised 04/08) Table 1(a)

This form is for use by sources subject to air quality permit requirements and may be revised periodically. (APDG 5178 v5)



CONCRETE BATCH PLANT EMISSION RATE CALCULATION WORKSHEET

(Draft 11-09-2011)

Permit No.:

Company:

Plant ID No. or name:

City:

Reviewer:

EXPEDITION LLC

DRIPPING WET CONCRETE

DRIPPING SPRINGS, TX

Project No.:

Project Type:

County:

Date:

HAYES

February 11, 2015

Spreadsheet Notes: This spreadsheet was developed to estimate emission rates from common concrete batching facilities using Environmental Protection Agency (EPA) emission factors and methodology. The spreadsheet is divided into 6 sections, each section can be accessed by the tabs at the bottom of the page or by clicking on the corresponding link in the index. Please fill in the gray boxes with the corresponding facility information. **Avoid using "click and drag" or "cut and paste", instead use the tab button, arrow keys or click on each grey cell individually.** A full length instruction manual will be available shortly.

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Operating Schedule	hours/day	days/week	weeks/year	hours/year
	12	7	52	4,368

Production Rate	yd ³ Concrete/ hour	yd ³ Concrete/ year
	200	873,600

Type of Plant	Select "Central Mix" or "Truck Mix"	Truck Mix
		Truck Mix

Concrete Composition

Would you like to use the default composition of concrete?

Yes**Standard Composition of One Cubic Yard of Concrete**

Material	lb/yd3
Aggregate	1,865
Sand	1,428
Cement	491
Supplement	73

Maximum Material Mass Flow Rate

Material	ton/hr	ton/yr
Aggregate	186.5	814,632
Sand	142.8	623,750
Cement	49.1	214,469
Supplement	7.3	31,886

Relevant Facility Information (additives/supplements used, special circumstances, etc.)

(Type any relevant additional information.)

Material Handling - Coarse Aggregate Transfer Points

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Enter the number of Aggregate Transfer Points (Enter 1-9)	2	Maximum Mass Flow Rate (ton/hr)	187
Use the maximum material mass flowrate? ("Yes" or "No")	Yes	Maximum Mass Flow Rate (ton/yr)	814,632

EPN (Identified on Process Flow Diagram)	EPN2	EPN3
Hourly Mass Flow Rate (ton/hr) = 187		
Annual Mass Flow Rate (ton/yr) = 814,632		
Control Efficiency (%)		
PM (lb/hr)	1.2869	1.2869
PM (ton/yr)	2.8105	2.8105
PM10 (lb/hr)	0.6155	0.6155
PM10 (ton/yr)	1.3441	1.3441
PM2.5 (lb/hr)	0.0932	0.0932
PM2.5 (ton/yr)	0.2035	0.2035

(Please refer to the Control Efficiency Table at the bottom of the page for commonly accepted controls.)

Material Handling - Sand Transfer Points

Enter the number of Sand Transfer Points (Enter 1-9)	2	Maximum Mass Flow Rate (ton/hr)	143
Use the maximum material mass flowrate? ("Yes" or "No")	Yes	Maximum Mass Flow Rate (ton/yr)	623,750

EPN (Identified on Process Flow Diagram)	EPN2	EPN3
Hourly Mass Flow Rate (ton/hr) = 143		
Annual Mass Flow Rate (ton/yr) = 623,750		
Control Efficiency (%)		
PM (lb/hr)	0.2999	0.2999
PM (ton/yr)	0.6549	0.6549
PM10 (lb/hr)	0.1414	0.1414
PM10 (ton/yr)	0.3088	0.3088
PM2.5 (lb/hr)	0.0214	0.0214
PM2.5 (ton/yr)	0.0468	0.0468

(Please refer to the Control Efficiency Table at the bottom of the page for commonly accepted controls.)

Raw Material Stockpile Emissions

Stockpile Area (acres)	0.05
Control Efficiency (%)	
Number of Active Days per Year	365
PM Inactive Emissions (ton/yr)	0.0000
PM10 Inactive Emissions (ton/yr)	0.0000
PM2.5 Inactive Emissions (ton/yr)	0.0000
PM Active Emissions (ton/yr)	0.1205
PM10 Active Emissions (ton/yr)	0.0602
PM2.5 Active Emissions (ton/yr)	0.0090
TOTAL PM Emissions (ton/yr)	0.1205
TOTAL PM10 Emissions (ton/yr)	0.0602
TOTAL PM2.5 Emissions (ton/yr)	0.0090

(Type material handling and stockpile notes here.)
MATERIAL IS WATERED WITH SPRINKLER SYSTEM

Material Handling & Stockpiles - Control Efficiency Table and Notes

Control Type	Control Efficiency %
Wet Material	50
Water Sprays	70
Chemical foam	80
Partial enclosure	50 - 85
Full enclosure	90
Enclosed by building	Up to 90
Washed Material	95
Washed material with water spray	98.5

(Type material handling and stockpile control notes here.)

Cement Silo Emission Rates

How many cement silos? (Up to 4)	1
Would you like to use the manufactures filter efficiency?	Yes

Emission Factors - Cement Silo		
lb _{PM} /ton	lb _{PM10} /ton	lb _{PM2.5} /ton
0.730	0.470	0.080

Cement Silo	1
Hourly Loading Rate (ton/hr)	49
Annual Loading Rate (ton/yr)	214,469
Control Efficiency (%)	99.9
PM (lb/hr)	0.0358
PM (ton/yr)	0.0783
PM10 (lb/hr)	0.0231
PM10 (ton/yr)	0.0504
PM2.5 (lb/hr)	0.0039
PM2.5 (ton/yr)	0.0086

(Type cement silo notes here.)

Note: BACT requires a minimum control efficiency of at least 99%

Supplement Silo Emission Rates

How many supplement silos? (Up to 4)	1
Would you like to use the manufactures filter efficiency?	Yes

Emission Factors - Supplement Silo		
lb _{PM} /ton	lb _{PM10} /ton	lb _{PM2.5} /ton
3.14	1.10	0.19

Cement Supplement Silo	1
Hourly Loading Rate (ton/hr)	7
Annual Loading Rate (ton/yr)	31,886
Control Efficiency (%)	99.9
PM (lb/hr)	0.0229
PM (ton/yr)	0.0501
PM10 (lb/hr)	0.0080
PM10 (ton/yr)	0.0175
PM2.5 (lb/hr)	0.0014
PM2.5 (ton/yr)	0.0030

(Type cement supplement silo notes here.)

BACT requires a minimum control efficiency of at least 99%

Cement/Supplement Weigh Hopper Emissions

Is there a cement/supplement weigh hopper? (Yes or No)	YES
Is it equipped with its own dust collector? (Yes or No)	

(Type relevant cement /supplement weigh hopper notes here.)

Truck Loading Emission Rates

What is the central baghouse efficiency? (%)	99.9
Use the Default Suction Shroud Capture Efficiency?	No
What is the Shroud Capture Efficiency?	99.9

Central Baghouse Stack Emission Rates

PM (lb/hr)	0.0630
PM (ton/yr)	0.1376
PM10 (lb/hr)	0.0175
PM10 (ton/yr)	0.0381
PM2.5 (lb/hr)	0.0030
PM2.5 (ton/yr)	0.0065

Truck Loading Fugitive Emission Rates

PM (lb/hr)	0.063
PM (ton/yr)	0.138
PM10 (lb/hr)	0.017
PM10 (ton/yr)	0.038
PM2.5 (lb/hr)	0.003
PM2.5 (ton/yr)	0.007

lb _{PM} /ton	lb _{PM10} /ton	lb _{PM2.5} /ton
1.118	0.310	0.053

	ton/hr	ton/yr
Aggregate	187	814,632
Sand	143	623,750
Cement	49	214,469
Supplement	7	31,886

(Type loading notes here.)

Emission Summary

Emission Point Number(s)	Name	PM		PM10		PM2.5	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
EPN2,3	Material Handling	3.173	6.931	1.514	3.306	0.229	0.501
EPN4	Stockpiles	---	0.120	---	0.060	---	0.009
EPN1	Central Baghouse Stack	0.063	0.138	0.017	0.038	0.003	0.007
EPN1	Loading Fugitives	0.063	0.138	0.017	0.038	0.003	0.007
EPN1	Cement Weigh Hopper*						
EPN1	Cement Silo	0.036	0.078	0.023	0.050	0.004	0.009
EPN1	Supplement Silo	0.023	0.050	0.008	0.018	0.001	0.003

*The cement/supplement weigh hopper is vented to the following facility: 0

Emission Summary - Notes

What is the format for EPNs? You can type them as 1,2 and 3 or as 1-3.

What if a device is vented to another system? They should have the same EPN and use the same efficiency.

(Type Emission Summary notes here.)