DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

General Concrete Batch Plant **Form GCBP**
Revision 5
8/5/11

RECEIVED
SEP 30 2011
DEPARTMENT OF ENVIRONMENTAL QUALITY

Please see instructions on page 4 before filling out the form.

All information is required. If information is missing, the application will not be processed.

IDENTIFICATION

1. Company Name	W.I.Construction Inc
2. Facility Name (if different than #1)	

FACILITY INFORMATION

3. Primary Facility Permit Contact Person/Title	Gene Williamson Owner-Secratary
4. Telephone Number and Email Address	541-454-2244 wiconcrete@gmail.com
5. Alternate Facility Contact Person/Title	Jack Ingram Owner-President
6. Telephone Number and Email Address	541-454-2244 wiconstruction@gmail.com
7. Address to which permit should be sent	18122 Hulden Rd.
8. City/State/Zip/county	Arlington,Oregon 97812 -Gilliam
9. Equipment Location Address (if different than #8)	
10. City/State/Zip/county	
11. Is the Equipment Portable?	☒ Yes ☐ No

CONCRETE BATCH PLANT

12. Proposed Initial Plant Location:	**NE 1/4 of SW1/4 of S30 T4S R9E**		
13. Nearest City:	**Mountain Home**	15. Estimated Startup Date:	**10-10-2011**
14. County:	**Elmore**		
16. Reason for Application	☒ Permit to construct a new source ☐ Permit to operate an existing unpermitted source ☐ Permit to modify/revise an existing permitted source (identify the permit below) Permit No.: Issue Date: Facility ID: Terminate Current Permit : ☐Yes ☐No		
17. Permit Draft Review	☐ Yes ☐ No		

CONCRETE BATCH PLANT SPECIFICATIONS

18. Manufacturer:	Erie Strayer	19. Model:	MCG-11T
20. Manufacture Date:	2-16-2006	21. Loadout Type:	☐ Truck ☐ Central
22. Rated Capacity:	160 (cy/hr) (cy/day) (cy/yr)		
23. Daily Throughput Options:	☒ 500 cy ☐ 1000 cy ☐ 1500 cy ☐ 2500 cy (Select only one (1))		

CEMENT STORAGE SILO BAGHOUSE

24. Manufacturer:	C&W	25. Model	CP-LPR8
26. Stack Height from Ground:	56 (ft)	27. Exit Air Flow Rate	450 (acfm)
28. Stack Inside Diameter:	NA (ft)	29. Bag Dimensions	NA (# bags) ft x ft
30. Stack Release Orientation:	☐ Horizontal ☒ Vertical w/ rain cap ☐ Unrestricted Vertical (Select only one (1))		

(please see attached. Info.)

CEMENT STORAGE SILO BAGHOUSE NO. 2

31. Manufacturer:	C&W	32. Model	CP-LPR-8
33. Stack Height from Ground:	56 (ft)	34. Exit Air Flow Rate	450 (acfm)
35. Stack Inside Diameter:	NA (ft)	36. Bag Dimensions	NA (# bags) ft x ft

37. Stack Release Orientation: ☐ Horizontal ☒ Vertical w/ rain cap ☐ Unrestricted Vertical (Select only one (1))

CEMENT SUPPLEMENT (FLYASH) STORAGE BAGHOUSE

38. Manufacturer:	NA	39. Model	
40. Stack Height from Ground:	(ft)	41. Exit Air Flow Rate	(acfm)
42. Stack Inside Diameter:	(ft)	43. Bag Dimensions	(# bags) ft x ft

44. Stack Release Orientation: ☐ Horizontal ☐ Vertical w/ rain cap ☐ Unrestricted Vertical (Select only one (1))

CEMENT SUPPLEMENT (FLYASH) STORAGE BAGHOUSE NO. 2

45. Manufacturer:	NA	46. Model	
47. Stack Height from Ground:	(ft)	48. Exit Air Flow Rate	(acfm)
49. Stack Inside Diameter:	(ft)	50. Bag Dimensions	(# bags) ft x ft

51. Stack Release Orientation: ☐ Horizontal ☐ Vertical w/ rain cap ☐ Unrestricted Vertical (Select only one (1))

WEIGH BATCHER BAGHOUSE(S)

52. Manufacturer:	C&W	53. Model	CP-35
54. Stack Height from Ground:	25 (ft)	55. Exit Air Flow Rate	216 (acfm)
56. Stack Inside Diameter:	NA (ft)	57. Bag Dimensions	NA (# bags) ft x ft

58. Stack Release Orientation: ☐ Horizontal ☒ Vertical w/ rain cap ☐ Unrestricted Vertical (Select only one (1))

INTERNAL COMBUSTION ENGINE SPECIFICATIONS

59. Type of Unit: ☐ New Unit ☐ Unpermitted Existing Unit ☐ Transfer from current Permit

60. Engine Displacement: 4.4 cu.in. (liters per cylinder) must be less than 10 | 61. Predicted Operating Hours | 320 hours/year

62. Engine ID Number: (Please See Attached Info.) | 63. Brake horsepower: horsepower (bhp) | 64. Certification: Tier: Select One*

65. Construction Date: | 66. Does your engine have an oxidation catalyst? ☐ Yes ☐ No

67. Stack Height from Ground: 12 (ft) | 68. Exit Air Flow Rate (acfm)

INTERNAL COMBUSTION ENGINE FUEL DESCRIPTION AND SPECIFICATIONS

69. Fuel Type: ☐ Diesel Fuel (gal/hr) ☐ Natural Gas (cf/hr) | 70. Sulfur Content % wt (if diesel) | 0.0015%

INTERNAL COMBUSTION ENGINE SPECIFICATIONS NO. 2

71. Type of Unit: ☐ New Unit ☐ Unpermitted Existing Unit ☐ Transfer from current Permit

72. Engine Displacement: (liters per cylinder) must be less than 10 | 73. Predicted Operating Hours | hours/year

74. Engine ID Number: | 75. Brake horsepower: horsepower (bhp) | 76. Certification: Tier: Select One*

77. Construction Date: | 78. Does your engine have an oxidation catalyst? ☐ Yes ☐ No

79. Stack Height from Ground: (ft) | 80. Exit Air Flow Rate (acfm)

INTERNAL COMBUSTION ENGINE FUEL DESCRIPTION AND SPECIFICATIONS NO. 2

81. Fuel Type:	☐ Diesel Fuel (gal/hr) ☐ Natural Gas (cf/hr)	82. Sulfur Content % wt (if diesel)	0.0015%

WATER HEATER/BOILER SPECIFICATIONS

83. Type of Unit:	☒ New Unit ☐ Unpermitted Existing Unit ☐ Transfer from current Permit		
84. Boiler ID Number:	051203	85. Rated Power:	1 Million British Thermal Units per hour (MMBtu/hr)
86. Construction Date:	02/10/2006	87. Operating hours:	8 hr/day 320 hr/yr
88. Stack Height from Ground:	15 (ft)	89. Exit Air Flow Rate	200 (acfm)

WATER HEATER FUEL DESCRIPTION AND SPECIFICATIONS

90. Fuel Type:	☐ Diesel Fuel (gal/hr) ☐ Natural Gas (cf/hr) ☒ Propane (cf/hr) 1200	91. Sulfur Content % wt (if diesel)	0.0015%

WATER HEATER/BOILER SPECIFICATIONS NO. 2

92. Type of Unit: NA	☐ New Unit ☐ Unpermitted Existing Unit ☐ Transfer from current Permit		
93. Boiler ID Number:		94. Rated Power:	Million British Thermal Units per hour (MMBtu/hr)
95. Construction Date:		96. Operating hours:	hr/day hr/yr
97. Stack Height from Ground:	(ft)	98. Exit Air Flow Rate	(acfm)

WATER HEATER FUEL DESCRIPTION AND SPECIFICATIONS NO. 2

99. Fuel Type:	☐ Diesel Fuel (gal/hr) ☐ Natural Gas (cf/hr) ☐ Propane (cf/hr)	100. Sulfur Content % wt (if diesel)	0.0015%

LOADOUT AND FUGITIVE CONTROL EFFICIENCIES

101. Loadout Control Efficiency:	Truck: ☒ 95% (shroud or equivalent) ☐ 99% (Baghouse) ☐ 99% (shroud w/ water ring) Central: ☐ 99% (Must be routed to baghouse)
102. Fugitive Dust Control Efficiency:	☒ 75% (Typical Best management Practices) ☐ 95% (Mandatory control of aggregate piles with 3-sided bunkers, covered and use of dust suppressant when pile is not being used)

TRANSFER POINTS

103. Number of Transfer Points	What is the total number of transfer points at the facility? 2

OPERATING HOURS

104. Operating hours of plant	Enter the maximum daily hours of operation 12 Daylight hours only? ☒ Yes ☐ No

* If engine is Tier certified 1, 2, 3, or 4 and subject to emission standards within 40 CFR 89 or 40 CFR 1039 attach as part of this application the engine manufacturer's EPA Tier 1, Tier 2, Tier 3 or Tier 4 Exhaust Emission Compliance Statement.

☐ **PERF Form is completed, signed and attached (only if a portable source)**

Certification of Truth, Accuracy, and Completeness (by Responsible Official, as defined in IDAPA 58.01.01.006) I hereby certify that based on information and belief formed after reasonable inquiry, the statements and information contained in this and any attached and/or referenced document(s) are true, accurate, and complete in accordance with IDAPA 58.01.01.123-124.

Gene Williamson	Sec.- owner.	9-26-11
Responsible Official Signature	*Responsible Official Title*	*Date*
Gene Williamson.		
Print or Type Responsible Official Name		

Gmail by Google

Sandy Lacy-Ingram <wiconstruction@gmail.com>

RE: Info Needed For Batch Plant Permit - Mt. Air Project

Andrew Titus <atitus@silvey.com> **Thu, Sep 22, 2011 at 11:20 AM**
To: Wiconstruction@gmail.com
Cc: Lee Anderson <landerson@silvey.com>, Jennifer@dresselent.com

Jack,

The batch plant will be located at lat/long coordinates:

East Boundary corners - on Rye Grass Rd

43° 2'40.88"N, 115°26'5.67"W SE Corner

43° 2'44.45"N, 115°26'6.47"W NE Corner

West Boundary corners

43° 2'44.41"N, 115°26'11.20"W

43° 2'40.93"N, 115°26'11.20"W

Legal Description:

Quarter	NE 1/4 of SW 1/4 of
Section	S30 T4S R9E
Meridian	Boise
State	Idaho

Elmore county
Mount Home -
Gen set.

Land owners are:

Lynn and Elsie Riggs

5714 W. Double Anchor Drive

Glenn's Ferry, ID 83623

(208) 366-2909 ranch

(208) 599-1534 cell

Site Address: none at present time

EMISSIONS DATA [S9L02633] **SEPTEMBER 26, 2011**

(S9L02633)-ENGINE (BGG01334)-GENERATOR (X3R01144)-GENSET

For Help Desk Phone Numbers Click here

Engine Emissions Data

For Emissions feedback and questions contact: engine_certification@cat.com

This link is case sensitive.

Emissions Definitions

This emission data is Caterpillar's best estimate for this rating. If actual emissions are required then an emission test needs to be run on your engine.

Serial Number (Machine)	
Serial Number (Engine)	**S9L02633**
Sales Model	C9
Build Date	2009-05-26
Interlock Code Progression	No Interlock Code Progression
As Shipped Data	
Engine Arrangement Number	2591808
Test Spec Number	0K6797
Certification	EPA / CARB w/ PM FEL @ Constant Speed
Labeled Model Year	2010
Family Code	ACPXL08.8ESX
Family Certification	EPA Tier 3
Family Certification	EU Stage IIIA
Family Certification	
Flash File	3458879
Flash File Progression	3488768
CORR FL Power at RPM	374 HP (279.0 KW) at 1800 rpms
Advertised Power	374hp 1,800RPM
Liters	

This is not an official emission certificate. This is for emission data information only.

Caterpillar Confidential: **Green**
Content Owner: Shane Gilles
Web Master(s): PSG Web Based Systems Support
Current Date: Monday, September 26, 2011 3:23:25 PM
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Data Privacy Statement.

PERFORMANCE DATA [S9L02633]

(S9L02633)-ENGINE (BGG01334)-GENERATOR (X3R01144)-GENSET

SEPTEMBER 26, 2011

For Help Desk Phone Numbers Click here

Perf No: DM8502 **Change Level:** 02

General | Heat Rejection | Emissions | Regulatory | Altitude Derate | Cross Reference

View PDF

SALES MODEL:	C9	**COMBUSTION:**	DI
ENGINE POWER (BHP):	374	**ENGINE SPEED (RPM):**	1,800
GEN POWER W/O FAN (EKW):	245.0	**HERTZ:**	60
GEN POWER WITH FAN (EKW):	230.0	**FAN POWER (HP):**	20.1
COMPRESSION RATIO:	16.1	**ADDITIONAL PARASITICS (HP):**	27.4
APPLICATION:	PACKAGED GENSET	**ASPIRATION:**	TA
RATING LEVEL:	STANDBY	**AFTERCOOLER TYPE:**	ATAAC
PUMP QUANTITY:	1	**AFTERCOOLER CIRCUIT TYPE:**	JW+OC, ATAAC
FUEL TYPE:	DIESEL	**INLET MANIFOLD AIR TEMP (F):**	120
MANIFOLD TYPE:	DRY	**JACKET WATER TEMP (F):**	192.2
GOVERNOR TYPE:	ELEC	**TURBO CONFIGURATION:**	SINGLE
REF EXH STACK DIAMETER (IN):	4	**TURBO QUANTITY:**	1
MAX OPERATING ALTITUDE (FT):	3,281	**TURBOCHARGER MODEL:**	S310-1.25
		CERTIFICATION YEAR:	2009
		PISTON SPD @ RATED ENG SPD (FT/MIN):	1,759.8

General Performance Data Top

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	BRAKE MEAN EFF PRES (BMEP)	BRAKE SPEC FUEL CONSUMPTN (BSFC)	VOL FUEL CONSUMPTN (VFC)	INLET MFLD PRES	INLET MFLD TEMP	EXH MFLD TEMP	EXH MFLD PRES	ENGINE OUTLET TEMP
EKW	%	BHP	PSI	LB/BHP-HR	GAL/HR	IN-HG	DEG F	DEG F	IN-HG	DEG F
230.0	100	374	306	0.337	18.0	71.0	122.1	1,127.3	48.7	851.6
207.0	90	342	280	0.343	16.7	67.8	121.8	1,091.6	45.7	833.2
184.0	80	309	253	0.347	15.3	63.1	121.4	1,058.4	41.7	815.7
172.5	75	293	240	0.349	14.6	60.7	121.2	1,042.2	39.6	807.5
161.0	70	277	227	0.352	13.9	58.2	121.0	1,026.3	37.4	799.9
138.0	60	245	201	0.360	12.6	53.2	120.7	994.8	33.7	789.7
115.0	50	214	175	0.372	11.3	48.0	120.5	964.1	29.9	780.2
92.0	40	182	149	0.385	10.0	42.2	120.5	933.5	26.0	768.5
69.0	30	150	123	0.399	8.6	33.9	120.6	891.4	21.3	749.6
57.5	25	134	110	0.406	7.8	29.8	120.8	865.0	18.9	738.4
46.0	20	117	96	0.415	7.0	25.6	120.9	834.7	16.4	725.9
23.0	10	83.3	68	0.439	5.2	16.9	120.5	744.8	11.6	676.1

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	COMPRESSOR OUTLET PRES	COMPRESSOR OUTLET TEMP	WET INLET AIR VOL FLOW RATE	ENGINE OUTLET WET EXH GAS VOL FLOW RATE	WET INLET AIR MASS FLOW RATE	WET EXH GAS MASS FLOW RATE	WET EXH VOL FLOW RATE (32 DEG F AND 29.98 IN HG)	DRY EXH VOL FLOW RATE (32 DEG F AND 29.98 IN HG)
EKW	%	BHP	IN-HG	DEG F	CFM	CFM	LB/HR	LB/HR	FT3/MIN	FT3/MIN
230.0	100	374	72	398.4	827.6	2,107.2	3,627.6	3,753.8	790.1	730.6
207.0	90	342	69	384.5	806.3	2,016.4	3,526.1	3,643.1	766.8	711.4
184.0	80	309	64	364.0	774.5	1,894.8	3,367.1	3,474.1	730.5	679.6
172.5	75	293	62	353.7	757.1	1,834.7	3,282.4	3,384.7	711.9	663.2
161.0	70	277	59	343.4	739.0	1,774.9	3,195.4	3,292.9	692.8	646.3
138.0	60	245	54	323.0	703.0	1,657.2	3,023.2	3,111.2	652.2	610.0

115.0	50	214	49	302.6	663.0	1,541.5	2,838.2	2,917.2	611.2	573.3
92.0	40	182	43	280.9	616.6	1,423.0	2,633.0	2,698.3	569.7	535.7
69.0	30	150	35	247.8	549.0	1,258.0	2,344.8	2,384.0	511.5	482.4
57.5	25	134	31	230.2	514.5	1,166.5	2,189.5	2,225.5	478.7	452.2
46.0	20	117	26	211.9	479.2	1,068.0	2,028.2	2,065.0	442.9	419.0
23.0	10	83.3	17	172.8	405.9	848.4	1,699.7	1,736.3	367.3	349.1

Heat Rejection Data Top

GENSET POWER WITH FAN	PERCENT LOAD	ENGINE POWER	REJECTION TO JACKET WATER	REJECTION TO ATMOSPHERE	REJECTION TO EXH	EXHUAST RECOVERY TO 350F	FROM OIL COOLER	FROM AFTERCOOLER	WORK ENERGY	LOW HEAT VALUE ENERGY	HIGH HEAT VALUE ENERGY
EKW	%	BHP	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN	BTU/MIN
230.0	100	374	5,586	961	14,771	7,943	2,060	4,014	15,869	38,676	41,200
207.0	90	342	5,263	841	13,902	7,403	1,910	3,710	14,483	35,860	38,200
184.0	80	309	4,938	817	12,894	6,787	1,752	3,271	13,117	32,891	35,037
172.5	75	293	4,779	761	12,395	6,488	1,671	3,056	12,438	31,382	33,430
161.0	70	277	4,628	695	11,906	6,200	1,592	2,846	11,758	29,883	31,833
138.0	60	245	4,379	614	11,026	5,714	1,444	2,449	10,408	27,106	28,875
115.0	50	214	4,133	530	10,137	5,231	1,296	2,070	9,060	24,341	25,930
92.0	40	182	3,863	460	9,164	4,697	1,145	1,692	7,725	21,500	22,903
69.0	30	150	3,509	629	7,856	3,951	978	1,194	6,372	18,362	19,560
57.5	25	134	3,312	637	7,195	3,579	889	960	5,683	16,698	17,787
46.0	20	117	3,100	587	6,526	3,209	797	739	4,982	14,958	15,934
23.0	10	83.3	2,625	415	5,013	2,326	597	356	3,531	11,209	11,940

Emissions Data Top

Units Filter All Units

RATED SPEED NOT TO EXCEED DATA: 1800 RPM

GENSET POWER WITH FAN		**EKW**	**230.0**	**172.5**	**115.0**	**57.5**	**23.0**
ENGINE POWER		**BHP**	**374**	**293**	**214**	**134**	**83.3**
PERCENT LOAD		**%**	**100**	**75**	**50**	**25**	**10**
TOTAL NOX (AS NO2)		G/HR	1,156	766	461	251	183
TOTAL CO		G/HR	254	178	182	237	254
TOTAL HC		G/HR	60	67	78	73	70
PART MATTER		G/HR	36.2	27.5	40.0	50.5	45.5
TOTAL NOX (AS NO2)	(CORR 5% O2)	MG/NM3	1,616.3	1,321.3	1,027.8	820.6	934.0
TOTAL CO	(CORR 5% O2)	MG/NM3	329.2	281.2	370.1	699.8	1,167.9
TOTAL HC	(CORR 5% O2)	MG/NM3	67.4	91.8	138.9	204.3	288.9
PART MATTER	(CORR 5% O2)	MG/NM3	39.6	37.0	71.7	156.7	175.0
TOTAL NOX (AS NO2)	(CORR 5% O2)	PPM	787	644	501	400	455
TOTAL CO	(CORR 5% O2)	PPM	263	225	296	560	934
TOTAL HC	(CORR 5% O2)	PPM	126	171	259	381	539
TOTAL NOX (AS NO2)		G/HP-HR	3.11	2.62	2.16	1.87	2.20
TOTAL CO		G/HP-HR	0.68	0.61	0.85	1.77	3.05
TOTAL HC		G/HP-HR	0.16	0.23	0.37	0.55	0.84
PART MATTER		G/HP-HR	0.10	0.09	0.19	0.38	0.55
TOTAL NOX (AS NO2)		LB/HR	2.55	1.69	1.02	0.55	0.40
TOTAL CO		LB/HR	0.56	0.39	0.40	0.52	0.56
TOTAL HC		LB/HR	0.13	0.15	0.17	0.16	0.15
PART MATTER		LB/HR	0.08	0.06	0.09	0.11	0.10

RATED SPEED NOMINAL DATA: 1800 RPM

GENSET POWER WITH FAN		**EKW**	**230.0**	**172.5**	**115.0**	**57.5**	**23.0**
ENGINE POWER		**BHP**	**374**	**293**	**214**	**134**	**83.3**
PERCENT LOAD		**%**	**100**	**75**	**50**	**25**	**10**
TOTAL NOX (AS NO2)		G/HR	1,071	709	426	232	170
TOTAL CO		G/HR	136	95	97	127	136
TOTAL HC		G/HR	32	35	41	39	37
TOTAL CO2		KG/HR	178	144	112	77	51
PART MATTER		G/HR	18.6	14.1	20.5	25.9	23.3
TOTAL NOX (AS NO2)	(CORR 5% O2)	MG/NM3	1,496.6	1,223.4	951.7	759.8	864.9
TOTAL CO	(CORR 5% O2)	MG/NM3	176.0	150.4	197.9	374.2	624.6

TOTAL HC	(CORR 5% O2)	MG/NM3	35.7	48.6	73.5	108.1	152.8
PART MATTER	(CORR 5% O2)	MG/NM3	20.3	19.0	36.8	80.4	89.7
TOTAL NOX (AS NO2)	(CORR 5% O2)	PPM	729	596	464	370	421
TOTAL CO	(CORR 5% O2)	PPM	141	120	158	299	500
TOTAL HC	(CORR 5% O2)	PPM	67	91	137	202	285
TOTAL NOX (AS NO2)		G/HP-HR	2.88	2.43	2.00	1.73	2.03
TOTAL CO		G/HP-HR	0.37	0.33	0.46	0.95	1.63
TOTAL HC		G/HP-HR	0.09	0.12	0.19	0.29	0.45
PART MATTER		G/HP-HR	0.05	0.05	0.10	0.19	0.28
TOTAL NOX (AS NO2)		LB/HR	2.36	1.56	0.94	0.51	0.37
TOTAL CO		LB/HR	0.30	0.21	0.21	0.28	0.30
TOTAL HC		LB/HR	0.07	0.08	0.09	0.09	0.08
TOTAL CO2		LB/HR	393	318	248	169	113
PART MATTER		LB/HR	0.04	0.03	0.05	0.06	0.05
OXYGEN IN EXH		%	10.8	11.9	12.9	13.9	14.7
DRY SMOKE OPACITY		%	0.4	0.4	0.7	1.3	1.5
BOSCH SMOKE NUMBER			0.24	0.26	0.63	1.11	1.26

Regulatory Information Top

EPA TIER 3 **2005 - 2010**

GASEOUS EMISSIONS DATA MEASUREMENTS ARE CONSISTENT WITH THOSE DESCRIBED IN EPA 40 CFR PART 89 SUBPART D AND ISO 8178 FOR MEASURING HC, CO, PM, AND NOX. GASEOUS EMISSIONS VALUES ARE WEIGHTED CYCLE AVERAGES AND ARE IN COMPLIANCE WITH THE NON-ROAD REGULATIONS.

Locality	Agency	Regulation	Tier/Stage	Max Limits - G/BKW - HR
U.S. (INCL CALIF)	EPA	NON-ROAD	TIER 3	CO: 3.5 NOx + HC: 4.0 PM: 0.20

EPA EMERGENCY STATIONARY **2011 - ----**

GASEOUS EMISSIONS DATA MEASUREMENTS ARE CONSISTENT WITH THOSE DESCRIBED IN EPA 40 CFR PART 60 SUBPART IIII AND ISO 8178 FOR MEASURING HC, CO, PM, AND NOX. GASEOUS EMISSIONS LIMIT VALUES ARE WEIGHTED CYCLE AVERAGES AND ARE IN COMPLIANCE WITH THE NON-ROAD REGULATIONS.

Locality	Agency	Regulation	Tier/Stage	Max Limits - G/BKW - HR
U.S. (INCL CALIF)	EPA	STATIONARY	EMERGENCY STATIONARY	CO: 3.5 NOx + HC: 4.0 PM: 0.20

Altitude Derate Data Top

ALTITUDE CORRECTED POWER CAPABILITY (BHP)

AMBIENT OPERATING TEMP (F)	50	60	70	80	90	100	110	120	130	NORMAL
ALTITUDE (FT)										
0	374	374	374	374	374	374	374	374	374	374
1,000	374	374	374	374	374	374	374	374	371	374
2,000	374	374	374	374	374	374	370	364	358	374
3,000	374	374	374	374	369	363	356	350	344	374
4,000	374	374	369	362	355	349	343	337	331	373
5,000	368	361	354	348	342	335	330	324	318	361
6,000	354	347	341	334	328	323	317	311	306	349
7,000	340	334	328	321	316	310	305	299	294	338
8,000	327	321	315	309	303	298	293	288	283	327
9,000	314	308	302	297	291	286	281	276	271	316
10,000	301	296	290	285	280	275	270	265	261	306
11,000	289	284	278	273	268	263	259	254	250	295
12,000	278	272	267	262	257	253	248	244	240	285
13,000	266	261	256	251	247	242	238	234	230	276
14,000	255	250	245	241	236	232	228	224	220	266
15,000	244	240	235	231	227	222	219	215	211	257

Cross Reference Top

Engine Arrangement

Arrangement Number	Effective Serial Number	Engineering Model	Engineering Model Version
2591808	S9L00003	GS322	-

Test Specification Data

Test Spec	Setting	Effective Serial Number	Engine Arrangement	Governor Type	Default Low Idle Speed	Default High Idle Speed
0K6797	PP5628	S9L00003	2591808	ELEC		

Exhaust System

The installed system must comply with the system limits below for all emissions certified engines to assure regulatory compliance.

MAX ALLOW SYS BACK PRESS	23.7	IN WTR
MANIFOLD TYPE	DRY	
Fuel System		
MAX FUEL FLOW TO TRANSFER PUMP (TO ENG)	46.5	GPH
MAX ALLOW FUEL SUPPLY LINE RESTRICTION	4.1	IN HG
MAX ALLOW FUEL TMP FROM TRANSFER PUMP IN	151	DEG F
MAX FUEL FLOW TO RETURN LINE (FROM ENG)	29.9	GPH
MAX ALLOW FUEL RETURN LINE RESTR	20.7	IN HG
NORMAL FUEL PRESSURE-CLEAN SYSTEM	72.5	PSI
FUEL SYSTEM TYPE	HEUI	
Lube System		
RECOMMENDED OIL TYPE (API OR CAT SPEC)	CH-15W-40	
OIL FILTER TYPE	FUL-FL.S-O	
LUBE SYSTEM OIL COOLER TYPE	PLATE	
NOM OIL PRESS W/SAE 10W30 OIL @ 99 DEG C	50.8	PSI
MIN LI OP W/SAE 10W30 OIL @ 99 DEG C	110.2	PSI
CRANKCASE VENTILATION TYPE	TO ATM	
FRONT SUMP STD/OPT/NAP	STD	
FRONT SUMP REFILL VOLUME W/FILTER CHANGE	41	QT
FRONT SUMP CAPACITY @ ADD MARK	34	QT
FRONT SUMP CAPACITY @ FULL MARK	38	QT
Mounting System		
C/G LOC - X DIMENSION - FRM REAR FACE OF BLK - (REF TM7077)	16.7716	IN
C/G LOC - Y DIMENSION - FRM CL OF CRANKSHAFT - (REF TM7077)	8.1890	IN
C/G LOC - Z DIMENSION - FRM CL OF CRANKSHAFT - (REF TM7077)	0.0071	IN
STD - FLYWHEEL HOUSING SIZE-SAE NUMBER	SAE1	
DRY WT ENG ONLY (DRAINED OF FLUIDS)	1,709	LB
ENGINE LENGTH	44.5275	IN
ENGINE WIDTH	44.8818	IN
Starting System		
LOWEST AMBIENT START TEMP W/O AIDS	302	DEG F

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SYSTEMS DATA [S9L02633]

(S9L02633)-ENGINE (BGG01334)-GENERATOR (X3R01144)-GENSET

SEPTEMBER 26, 2011

For Help Desk Phone Numbers Click here

Reference Number: DM8502 **Version Symbol:** **Change Level:**

Sales Model: C9 DI TA AA **Eff. Serial Number Prefix:** S9L **Engr. Model:**

Description	Answer	Unit
Air Intake System		
The installed system must comply with the system limits below for all emissions certified engines to assure regulatory compliance.		
MAX ALLOW INTAKE RESTR W/CLEAN ELEMENT	14.9	IN WTR
MAX ALLOW INTAKE RESTR W/DIRTY ELEMENT	30.1	IN WTR
MAX ALLOW INTAKE MANIFOLD TEMP	120	DEG F
ALLOW PRESS DROP-COMPR OUT TO MANF IN	4.4	IN HG
MAX TURBO INLET AIR TEMPERATURE	122	DEG F
MAX AIR FILTER INLET AIR TEMPERATURE	122	DEG F
CHARGE AIR FLOW AT RATED SPEED	60.0	LB/MIN
TURBO COMPR OUT PRESS AT RATED SPD (ABS)	101.8	IN HG
TURBO COMPR OUT TEMP AT RATED SPEED	398	DEG F
Cooling System		
ENGINE ONLY COOLANT CAPACITY	5.8	GAL
TOTAL SYS COOLANT CAP (PKG GENSETS ONLY)	9.5	GAL
MAX ALLOW ENGINE COOLANT OUTLET TEMP	223	DEG F
REGULATOR START-TO-OPEN TEMP	189	DEG F
REGULATOR FULL OPENING TEMPERATURE	208	DEG F
REGULATOR LOCATION	OUTLET	
AMBIENT COOLING CAPABILITY AT RATED SPD	122	DEG F
MIN RECOMMENDED SYS PRESS CAP PRESSURE	10.0	PSI
MAX UNINTERRUPTED FILL RATE	3	GPM
MIN ALLOW COOLANT LOSS-PERCT OF TOTAL	90	PERCENT
COOL LOSS-MAX % OF PUMP PRESS RISE LOSS	10	PERCENT
AIR VENT CAPABILITY AT 35 PERCT PRL	3.80	PINTS/MIN
RADIATOR AIR FLOW (PKG GENSETS ONLY)	17,551.4	CU FT/MIN
Engine Spec System		
CYLINDER ARRANGEMENT	INLINE	
NUMBER OF CYLINDERS	6	CYL
CYLINDER BORE DIAMETER	4.4094	IN
PISTON STROKE	5.8661	IN
TOTAL CYLINDER DISPLACEMENT	537	CU IN
COMPRESSION RATIO (TO ONE)	16.1	
CRANKSHAFT ROTATION (FROM FLYWHEEL END)	CCW	
CYLINDER FIRING ORDER	1-5-3	
CYLINDER FIRING ORDER - CONTINUED	6-2-4	
NUMBER 1 CYLINDER LOCATION	FRONT	
STROKES/COMBUSTION CYCLE	4	STROKES
APPLICATION CLASS	GEN	
ENGINE DUTY CYCLE	STDB	
FACTORY TEST SPEC	0K6797	
EMISSION CERTIFICATION AGENCIES	EPA TIER 3	
EMISSION CERTIFICATION YEAR	2005	
STD - AFTERCOOLER DESIGN TEMP	120	DEG F
GENSET LINE FREQUENCY	60	HZ

C&W Environmental Solutions

CP-Series Silo Dust Collectors

General Information

C&W's CP-Series of Silo Dust Collectors offer you Pulse-Jet Technology combined with our cartridge filters to provide a highly effective, yet inexpensive solution for dust control. Our CP Silo Collectors are engineered by dust control specialists with careful attention to efficiency and user-friendliness. Also, available are weigh batcher collectors and round silo collectors.

Benefits	Features:
Easy to Maintain	Tool-less Exchange of Filter Media
	Top Entry for Clean Side Filter Exchange
Efficiency	99.99% Filtration Efficiency*
Efficiency, Compact	Vertical, Wide-Pleat Cartridges
Performance	Inlet Air Regulator and Moisture Separator
	Test Ports for Monitoring Filter Media
Reliable, Easy to Operate	Solid State Adjustable Timers w/ LED Display
Long-Lasting, Durable	12 Gauge, Heavy Duty Steel Construction

Options

- Pressure Switch for Automatic Cleaning
- Mini-helic Gauge
- Custom Designs and Sizes
- Special Mounting Flange for Adapting to Existing Flange
- Blower Packages, Standard or Custom-Built
- Special Filter Media
- Silo Anti-Overfill System
- Pressure Relief Valves and Bin Indicators

Specs

Specifications	CP-35	CP-100	CP-230	CP-305	CP-450-678	CP450-1239
Total Filtration Area (sq. ft.)	36	110	267	356	535	456
Number of Cartridges	2	1	6	8	6	12
Cartridge Size	8" x 19"	12" x 27"	8" x 39"	8" x 39"	8" x 78"	8" x 39
Overall Height	2' 4"	4' 5"	5' 4"	5' 2"	12'	5'6"
Flange Width	2' 0"	1' 10"	3' 6"	4' 8"	3' 6"	4'8"
Flange Length	1' 0"	1' 10"	2' 4"	2' 4"	2' 4"	3'6"
Approx. Weight (lbs.)	165	450	610	975	1,025	1025
Compressed Air Req.	3	4	5	6	6	6
CFM Recommended	140	400	850	1,600	2,500	2500
Min. Design Efficiency*	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%
Cleaning Mechanism	Pulse Jet	Pulse Jet	Pulse Jet	Pulse Jet	Pulse Jet	Pulse Jet

Specifications	CP-610	CP-760	CP-900	CP-1220	CP-1520	CP-2250
Total Filtration Area (sq. ft.)	713	891	1069	1426	1782	2673
Number of Cartridges	8	10	12	16	20	30
Cartridge Size	8" x 78"	8" x 78"	8" x 78"	8" x 78"	8" x 78"	8" x 78"
Overall Height	9' 6"	9' 6"	12' 0"	14' 0"	14' 0"	14' 0"
Flange Width	4' 8"	4' 8"	4' 8"	6' 0"	6' 0"	8' 0"
Flange Length	3' 6"	3' 6"	3' 6"	5' 4"	6' 0"	6' 0"
Approx. Weight (lbs.)	1,395	1,495	3,000	4,000	4,500	5,550
Compressed Air Required	8	10	12	12	12	12
CFM Recommended	3,000	4,000	5,000	6,700	8,400	12,400
Min. Design Efficiency*	99.99%	99.99%	99.99%	99.99%	99.99%	99.99%
Cleaning Mechanism	Pulse Jet	Pulse Jet	Pulse Jet	Pulse Jet	Pulse Jet	Pulse Jet

* At Standard Test Conditions

Weigh Batcher - CP-35

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www.cwmfg.com

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C&W Manufacturing & Sales Co.
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info@cwmfg.com • www.cwmfg.com

Air Permit Work Sheet for C&W Dust Collector

Dust Collector Model No.	CP35	
Type of Collector	Silo	
Cleaning Mechanism	pulse jet w/ adjustable timer	
Fan Included	n	
Fan Power	na	hp
Collector Flow Rate	216	acfm
Filter Material	Spun Bond polyester	
Filter Efficiency	99.99	
Filter Media Max Pressure Drop	12	in h_2o
Total Area of Filter Media	45	sqft
Nominal Filter Diameter	8	in
Nominal Filter Length	1.58	ft
Quantity of Filters	2	
Number of Compartments	1	
Number of Filters per Compartment	2	
Filtering Velocity	4.78	acfm / ft^2 of cloth

Maximum concrete production	160	yds / hr
Number of fill lines	0	
Application Flow Rate	216	acfm
Type of Particulate Controlled	1. cement	
Name of Source(s) or Equipment being Controlled	03. WEIGH BATCHER	
Total number of hours of operation per year	2,600	hr / yr

	inlet		outlet	
Particulate Grain Loading	0.68272	grains / scf	0.000068272	grains / scf
Particulate Emissions	1.26400	lbs / hr	0.0001264	lbs / hr
Particulate Emissions	1.64320	tons / yr	0.0001643	tons / yr

Outlet Area	0.51	ft^2
Outlet Velocity	7.06	ft / s

O Collectors

Round Silo Dust Collectors

GENERATION 2.0

General Information

STEEL

C&W's "O Collectors" (Round Silo Dust Collectors) offer you Pulse-Jet technology and our cartridge filters to provide an efficient yet inexpensive solution for dust control. These collectors are compact and user-friendly with a low-profile and POP in-out filter media exchange, with no tools or need to remove blow pipes. They can also expand to higher capacities without having to replace the units.

Options

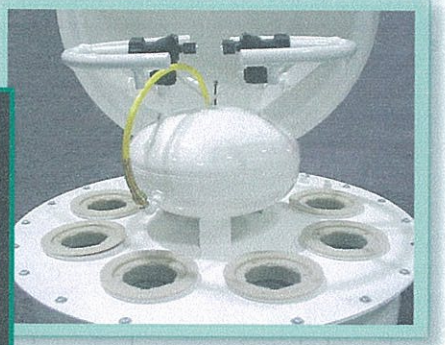
- Automatic On/Off Flow Switch
- Minihelic Gauge
- Special Adaptable Mounting Flange
- Air Tank Auto-Drain
- Silo Anti-Overfill System
- Pressure Relief Valves and Bin Indicators

Specs

Specs apply to both the Steel and Polyethylene Units

Specifications	LPR-4-S	LPR-6-S	LPR-8-S
Total Filtration Area (sq. ft.)	178	267	356
Number of Cartridges	4	6	8
Cartridge Size	8" x 39"	8" x 39"	8" x 39"
Overall Height - Steel*	72"	72"	72"
Overall Height - Polyethylene*	78"	78"	78"
Flange Diameter	44" o.d.	44" o.d.	44" o.d.
Approx. Weight (lbs.) - Steel *	670	695	720
Approx. weight (Lbs.) - Polyethylene*	400	425	450
Compressed Air Required	3	3	3
CFM Recommended**	1,170	1,760	2,340
Min. Design Efficiency***	99.99%	99.99%	99.99%
Cleaning Mechanism	Pulse Jet	Pulse Jet	Pulse Jet

*Includes Mounting Flange ** CFM shown for typical application. Unique application may change CFM recommended ***Using Standard Test Conditions



C&W Manufacturing and Sales Co.
1-800-880-DUST
www.cwmfg.com

C&W Environmental Solutions

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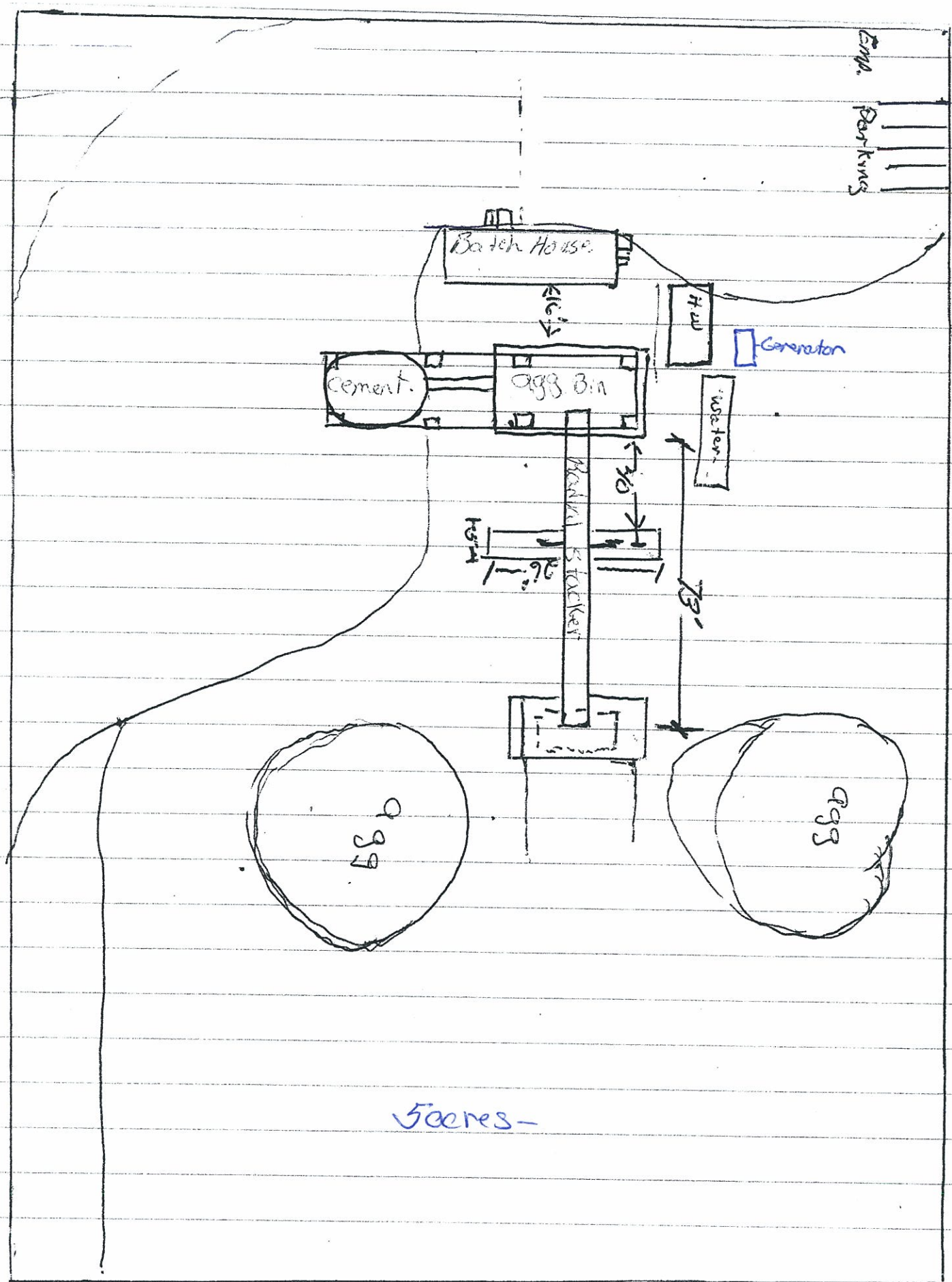
Air Permit Work Sheet for C&W Dust Collector

Dust Collector Model No.	CP-LPR-8-S	
Type of Collector	Silo	
Cleaning Mechanism	pulse jet w/ adjustable timer	
Fan Included	n	
Fan Power	na	hp
Collector Flow Rate	2,340	acfm
Filter Material	Spun Bond polyester	
Filter Efficiency	99.99	
Filter Media Max Pressure Drop	12	in h_2o
Total Area of Filter Media	356	sqft
Nominal Filter Diameter	8	in
Nominal Filter Length	3.25	ft
Quantity of Filters	8	
Number of Compartments	1	
Number of Filters per Compartment	8	
Filtering Velocity	1.26	acfm / ft^2 of cloth

Maximum concrete production	160	yds / hr
Number of fill lines	1	
Application Flow Rate	450	acfm
Type of Particulate Controlled	1. cement	
Name of Source(s) or Equipment being Controlled	01.CEMENT DELIVERY TO SILO	
Total number of hours of operation per year	2,600	hr / yr

	inlet		outlet	
Particulate Grain Loading	0.00830	grains / scf	0.000000830	grains / scf
Particulate Emissions	0.03200	lbs / hr	0.0000032	lbs / hr
Particulate Emissions	0.04160	tons / yr	0.0000042	tons / yr

Outlet Area	0.52	ft^2
Outlet Velocity	14.42	ft / s


Emp. Parking
Batch House
16'
H.W
Generator
Cement.
agg Bin
water
Radial Stacker
30'
73'
agg
agg

5acres-