Baghouse Testing Matrix - Conceptual Plan
PCC Structurals - Large Parts Campus

Baghouse	Filtration Type	Metal Processed (Steel or Ti)	2020 Dust Collection [1] (tons/yr)	Dust Nickel Comp. [2] (% of PM)	Temperature	Process(es) Controlled											Selection Rationale
						High Throughput/Low Metal					Grinding	Cutting and Hot Work					
						Shotblast	Sandblast	Knockout	Investing	Other		Cutting (Sawing)	Torch Cut	Plasma + Air Arc Cut	Burnoff	Casting	
Selected - LPCS																	
8687	**BH**	**Ti**	**141**	**0.10**	Indoor [3]	X											(4)
8901	**BH + HEPA**	**Steel**	**6.40**	**49.0**	77.7°F [5]						X	X					(6)
9203 - WEST	**BH + HEPA**	**Steel**	**6.12**	**22.0**	82.9°F [7]							X	X		X		(8)
9203 - EAST					90.6°F [7]												
Not Selected - LPCS Baghouses																	
0585	BH	Steel	--	--	--												(9)
1659	BH	Steel	4.26	2.40	Indoor [3]		X										(10)
1807	BH	Steel	22.9	0.23	Indoor [3]			X									(10)
2214	BH	Steel	0.073	2.00	Indoor [3]					X							(11)
3804	BH	Steel	3.49	7.4E-03	Indoor [3]				X								(12)
5549	BH + HEPA	Steel	1.01	40.0	72.6°F [7]						X						(12)
6417	BH + HEPA	Steel	0.86	21.0	72.8°F [7]						X						(12)
6532	BH + HEPA	Steel	3.29	19.0	86.1°F [7]						X	X					(12)
6671	BH	Steel	0.12	1.60	Indoor [3]					X							(13)
9115	BH	Steel	2.85	49.0	Indoor [3]						X	X					(10)
9196	BH + HEPA	Steel	0.58	3.00	Indoor [3]		X				X						(12)
9255	BH + HEPA	Steel	3.12	2.10	Indoor [3]	X											(10)
9256	BH + HEPA	Steel	0.19	0.63	108°F [14]											X	(15)
9670	BH + HEPA	Steel	0.010	51.8	Indoor [16]											X	(17)
Not Selected - LSBS1 Baghouses																	
5062	BH	Steel	2.28	46.0	Indoor [3]						X						(12)
6265	BH	Steel	0.48	37.0	Indoor [3]						X						(12)
Not Selected - LSBS2 Baghouses																	
5457	BH	Steel	22.9	1.50	Indoor [3]	X	X										(10)
5365	BH + HEPA	Steel	18.4	2.40	Indoor [3]		X				X						(18)
6418	BH	Steel	2.91	0.87	Indoor [3]		X				X						(12)
Not Selected - LPCT Baghouses																	
3006	BH	Ti	7.92	1.6E-03	Indoor [3]		X				X	X					(18)
3007	BH + HEPA	Ti	7.56	ND	Indoor [3]				X								(18)
3342	BH + HEPA	Ti	2.20	2.0E-03	Indoor [3]				X								(12)
7094	BH	Ti	1.97	0.072	Indoor [3]	X											(12)
3930	BH	Ti	1.22	0.018	Indoor [3]								X		X		(12)
8150	BH	Ti	0.054	0.022	Indoor [3]					X							(19)
10628	BH + ULPA	Ti	1.67	0.041	Indoor [3]	X	X										(20)
Not Selected - LMA Baghouses																	
7095	BH	Ti	19.8	2.3E-03	Indoor [3]		X				X						(18)
7096	BH	Ti	0.30	0.068	Indoor [3]						X						(12)
Not Selected - MAP Baghouses																	
0802	BH + HEPA	Ti	6.04	0.034	Indoor [3]								X				(12)
9031	BH + HEPA	Steel	5.16	14.0	Indoor [3]									X			(12)
0803	BH + HEPA	Ti	2.96	0.034	Indoor [3]								X				(12)

REFERENCES:

(1) Information provided by PCC Structurals.
(2) Dust nickel composition based on testing data presented in the facility emissions inventory. Where more than one analysis was performed, values are calculated based on an average of analysis results.
(3) Baghouse exhaust temperature is equivalent to the indoor ambient temperature of the facility.
(4) Highest annual dust collection of all baghouses, and a conventional baghouse (i.e. no after-filter).
(5) Inlet duct temperature data from June 2016 particulate and metals emissions study conducted by TRC.
(6) Highest dust nickel content and annual dust collection for baghouses in this category (grinding and sawing) processing steel super alloy. Baghouse ranks in top 10 for both annual dust collection and dust nickel content. Baghouse also has a HEPA after-filter.
(7) Stack outlet temperature data from June 2016 particulate and metals emissions study conducted by TRC.
(8) Highest annual dust collection for baghouses in category (cutting and hot work) processing steel super alloy. Baghouse ranks in top 10 for both annual dust collection and dust nickel content. Baghouse also has a HEPA after-filter. This baghouse has six stacks, so two of the stacks are identified for testing.
(9) This baghouse is no longer in service.
(10) Lower annual dust collection than the baghouse chosen for testing in the same category.
(11) Small Potpacking baghouse. Low annual dust collection and low dust nickel content compared to other baghouses.
(12) Lower annual dust collection and dust nickel content than the baghouse chosen for testing in the same category.
(13) Large Potpacking baghouse. Low annual dust collection and low dust nickel content compared to other baghouses.
(14) Temperature data from July 2014 air casting particulate emissions study conducted by The Avogadro Group, LLC. Temperature is representative of elevated indoor ambient temperature during casting operations.
(15) Low annual dust collection and low dust nickel content compared to other baghouses.
(16) Limited airflow during casting activities. Temperature is equivalent to indoor ambient temperature when the vacuum chamber is unsealed.
(17) Low annual dust collection compared to other baghouses.
(18) Lower dust nickel content than the baghouse chosen for testing in the same category.
(19) Dry developer baghouse. Lower dust nickel content than the baghouse chosen for testing in the same category.
(20) Replacement baghouse for BH 3747 installed in 2021. Assumes collection, dust nickel composition, and temperature for BH 3747 as representative. Lower annual dust collection and dust nickel content than the baghouse chosen for testing in the same category.