PCC Structurals, Inc. - SSBO - PTE Toxic Air Contaminant Emissions Inventory

Confidential Business Information in this document has been redacted.

This version of the Emissions Inventory is acceptable to release publicly.

Table D1
SSBO Alloy Data
PCC Structurals, Inc. - SSBO - PTE

Pollutant	CAS/ODEQ ID	Metal Composition (%)		Emission Factor - 24-Hour (lb/ton metal)	Emission Factor - Annual (lb/ton metal)
		Daily	Annual		
Vacuum Casting, Steel Parts					
PM Emission Factor (lb/ton metal poured)		5.7E-03 (1)	5.7E-03 (1)	5.7E-03 (1)	5.7E-03 (1)
Alloy Aluminum Content	7429-90-5	[redacted]			
Aluminum	7429-90-5				
Antimony	7440-36-0				
Arsenic	7440-38-2				
Alloy Chromium Content	7440-47-3				
Chromium Compounds	7440-47-3				
Chromium VI	18540-29-9				
Alloy Cobalt Content	7440-48-4				
Cobalt	7440-48-4				
Cobalt Compounds	--				
Copper	7440-50-8				
Lead	7439-92-1				
Alloy Manganese Content	7439-96-5				
Manganese	7439-96-5				
Manganese Compounds	--				
Mercury	7439-97-6				
Alloy Molybdenum Content	7439-98-7				
Molybdenum trioxide	1313-27-5				
Alloy Nickel Content	7440-02-0				
Nickel	7440-02-0				
Nickel Oxide	1313-99-1				
Phosphorus	504				
Selenium	7782-49-2				
Silver	7440-22-4				
Thallium	7440-28-0				
Vanadium	7440-62-2				

NOTES:

[redacted]

REFERENCES:

(1) See Table 2, SSBO - Vacuum Casting Parts - PTE TAC Emissions Estimates.

(2) Information provided by client based on confidential business information - alloy composition data.

(3) Engineering assumption based on pollutant oxidation of elements. Assumes minimal oxidation for vacuum processes.

[redacted]

Table D2
Baghouse Data
PCC Structurals, Inc. - SSBO - PTE

TAC	CAS	Sample Percentage (%)														
		SSBO Baghouses											SSB1 Baghouses			
		2046 [2]	4448 [2]	8195 [1]	9338 [1]	10193 [1]	10194 [1]	10498 [3]	10499 [1]	10482 [2]	CLEAN [4]	8628 [1]	8629 [1]	9164 [1]	9439 [5]
Aluminum	7429-90-5	12 0	12 0	0 77	0.64	0.60	1.80	0 71	0 23	12.0	2.62	0.93	2.13	0.16	2.13
Arsenic	7440-38-2	ND ND	ND ND	8.1E-04	7.9E-04	1.7E-03	ND ND	1 5E-03	6 3E-04	ND ND	9.6E-04	1.2E-03	6.3E-04	1 6E-03	6 3E-04
Barium	7440-39-3	--	--	2.5E-03	ND ND	ND ND	0 010	4 6E-03	ND ND	--	ND ND	2.2E-03	9.0E-03	1 0E-03	9 0E-03
Beryllium	7440-41-7	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
Cadmium	7440-43-9	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
Chromium	7440-47-3	0.012	0.012	11.1	1 51E+01	18.2	1.46	15 6	2 30	0.012	0.11	15.9	1.02E+01	3 77	1 02E+01
Chromium VI	18540-29-9	1 7E-05	1 7E-05	5.0E-05	7.9E-05	1.4E-04	1.0E-05	1 0E-03	0.090	1.7E-05	ND ND	1.3E-04	1.2E-05	0.14	1 2E-05
Cobalt	7440-48-4	7 0E-03	7 0E-03	2.91	3.59	11.8	0.36	4 51	2 56	7.0E-03	0 040	6.30	2.11	0 36	2.11
Copper	7440-50-8	2 3E-03	2 3E-03	0.17	0.11	0 040	9.1E-03	0.030	0 27	2.3E-03	0 040	0.13	0 040	1 77	0.040
Lead	7439-92-1	4 8E-04	4 8E-04	2.7E-04	ND ND	ND ND	ND ND	ND ND	2.9E-04	4.8E-04	7.4E-03	ND ND	ND ND	4.1E-04	ND ND
Manganese	7439-96-5	2.1E-03	2.1E-03	0.11	0 080	0.10	0 040	0.090	0.080	2.1E-03	0.16	0 080	0 050	0 33	0.050
Mercury	7439-97-6	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
Nickel	7440-02-0	7.4E-03	7.4E-03	28.4	41.0	42.2	3.79	42 5	16 2	7.4E-03	0.18	35.6	27 8	8 50	27 8
Selenium	7782-49-2	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	0 010	ND ND	ND ND	ND ND
Silver	7440-22-4	--	--	ND ND	ND ND	ND ND	1.1E-03	2 5E-03	ND ND	--	1.7E-03	1.7E-03	ND ND	ND ND	ND ND
Vanadium	7440-62-2	0.012	0.012	7.1E-03	7.2E-03	7.1E-03	2.8E-03	6.9E-03	3.4E-03	0.012	5.9E-03	0 020	5.2E-03	7 8E-03	5 2E-03
Zinc	7440-66-6	4 2E-03	4 2E-03	0.010	4.6E-03	3.2E-03	0 020	2.9E-03	9 8E-03	4.2E-03	7.8E-03	0 040	8.6E-03	0.020	8 6E-03

NOTES:

ND = all analysis results were below the method detection limit

REFERENCES:

(1) Results of April 2021 baghouse dust analysis

(2) Based on a summary of baghouse dust analyses from LPC Baghouse 3084 from multiple years LPC baghouse 3084 controls similar investing activities

(3) Results of April 2021 dust analysis for Baghouse 4718 Baghouse 4718 was decommissioned in 2021 activities were routed to Baghouse 10498

(4) Results of April 2021 dust analysis for Baghouse 2017 Baghouse 2017 will be decommissioned and replaced by a baghouse with ULPA filtration This future baghouse does not have a PCC asset number and is designated CLEAN in the emissions inventory

(5) Results of April 2021 dust analysis for Baghouse 8629 used as representative for Baghouse 9439 Both baghouses control similar activities

Table D3
Source Group Emission Factors
PCC Structurals, Inc. - SSBO - PTE

TAC		Dust Analysis (units)				Emission Factor [a] (lb/ton PM generated)	
		Daily		Annual		Daily	Annual
SSBO							
Investing #1	**BH 2046**	**358**	**(lb PM collected/day)** [1]	**65.3**	**(tons PM collected/yr)**	**--**	**--**
PM		358	lb PM generated/day [b]	65 4	(tons PM generated/yr) [c]	--	--
Aluminum	7429-90-5	12 0	(% of PM) [2]	12 0	(% of PM) [2]	240	240
Arsenic	7440-38-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Barium	7440-39-3	--	(% of PM) [2]	--	(% of PM) [2]	--	--
Beryllium	7440-41-7	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Cadmium	7440-43-9	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Chromium	7440-47-3	0 012	(% of PM) [2]	0 012	(% of PM) [2]	0 24	0 24
Chromium VI	18540-29-9	1 7E-05	(% of PM) [2]	1 7E-05	(% of PM) [2]	3 4E-04	3 4E-04
Cobalt	7440-48-4	7 0E-03	(% of PM) [2]	7 0E-03	(% of PM) [2]	0 14	0 14
Copper	7440-50-8	2 3E-03	(% of PM) [2]	2 3E-03	(% of PM) [2]	0 046	0 046
Lead	7439-92-1	4 8E-04	(% of PM) [2]	4 8E-04	(% of PM) [2]	9 6E-03	9 6E-03
Manganese	7439-96-5	2 1E-03	(% of PM) [2]	2 1E-03	(% of PM) [2]	0 042	0 042
Mercury	7439-97-6	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Nickel	7440-02-0	7 4E-03	(% of PM) [2]	7 4E-03	(% of PM) [2]	0 15	0 15
Selenium	7782-49-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Silver	7440-22-4	--	(% of PM) [2]	--	(% of PM) [2]	--	--
Vanadium	7440-62-2	0 012	(% of PM) [2]	0 012	(% of PM) [2]	0 24	0 24
Zinc	7440-66-6	4 2E-03	(% of PM) [2]	4 2E-03	(% of PM) [2]	0 084	0 084
Investing #2	**BH 4448**	**31.2**	**(lb PM collected/day)** [1]	**5.70**	**(tons PM collected/yr)**	**--**	**--**
PM		31 3	lb PM generated/day [b]	5 71	(tons PM generated/yr) [c]	--	--
Aluminum	7429-90-5	12 0	(% of PM) [2]	12 0	(% of PM) [2]	240	240
Arsenic	7440-38-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Barium	7440-39-3	--	(% of PM) [2]	--	(% of PM) [2]	--	--
Beryllium	7440-41-7	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Cadmium	7440-43-9	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Chromium	7440-47-3	0 012	(% of PM) [2]	0 012	(% of PM) [2]	0 24	0 24
Chromium VI	18540-29-9	1 7E-05	(% of PM) [2]	1 7E-05	(% of PM) [2]	3 4E-04	3 4E-04
Cobalt	7440-48-4	7 0E-03	(% of PM) [2]	7 0E-03	(% of PM) [2]	0 14	0 14
Copper	7440-50-8	2 3E-03	(% of PM) [2]	2 3E-03	(% of PM) [2]	0 046	0 046
Lead	7439-92-1	4 8E-04	(% of PM) [2]	4 8E-04	(% of PM) [2]	9 6E-03	9 6E-03
Manganese	7439-96-5	2 1E-03	(% of PM) [2]	2 1E-03	(% of PM) [2]	0 042	0 042
Mercury	7439-97-6	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Nickel	7440-02-0	7 4E-03	(% of PM) [2]	7 4E-03	(% of PM) [2]	0 15	0 15
Selenium	7782-49-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Silver	7440-22-4	--	(% of PM) [2]	--	(% of PM) [2]	--	--
Vanadium	7440-62-2	0 012	(% of PM) [2]	0 012	(% of PM) [2]	0 24	0 24
Zinc	7440-66-6	4 2E-03	(% of PM) [2]	4 2E-03	(% of PM) [2]	0 084	0 084
Finishing, Inspection	**BH 8195**	**11.0**	**(lb PM collected/day)** [1]	**2.00**	**(tons PM collected/yr)**	**--**	**--**
PM		11 0	lb PM generated/day [b]	2 00	(tons PM generated/yr) [c]	--	--
Aluminum	7429-90-5	0 77	(% of PM) [2]	0 77	(% of PM) [2]	15 4	15 4
Arsenic	7440-38-2	8 1E-04	(% of PM) [2]	8 1E-04	(% of PM) [2]	0 016	0 016
Barium	7440-39-3	2 5E-03	(% of PM) [2]	2 5E-03	(% of PM) [2]	0 050	0 050
Beryllium	7440-41-7	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Cadmium	7440-43-9	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Chromium	7440-47-3	11 1	(% of PM) [2]	11 1	(% of PM) [2]	222	222
Chromium VI	18540-29-9	5 0E-05	(% of PM) [2]	5 0E-05	(% of PM) [2]	1 0E-03	1 0E-03
Cobalt	7440-48-4	2 91	(% of PM) [2]	2 91	(% of PM) [2]	58 2	58 2
Copper	7440-50-8	0 17	(% of PM) [2]	0 17	(% of PM) [2]	3 40	3 40
Lead	7439-92-1	2 7E-04	(% of PM) [2]	2 7E-04	(% of PM) [2]	5 4E-03	5 4E-03
Manganese	7439-96-5	0 11	(% of PM) [2]	0 11	(% of PM) [2]	2 20	2 20
Mercury	7439-97-6	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Nickel	7440-02-0	28 4	(% of PM) [2]	28 4	(% of PM) [2]	568	568
Selenium	7782-49-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Silver	7440-22-4	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Vanadium	7440-62-2	7 1E-03	(% of PM) [2]	7 1E-03	(% of PM) [2]	0 14	0 14
Zinc	7440-66-6	0 010	(% of PM) [2]	0 010	(% of PM) [2]	0 20	0 20
Finishing, Rework Grinding	**BH 9338**	**361**	**(lb PM collected/day)** [1]	**65.9**	**(tons PM collected/yr)**	**--**	**--**
PM		361	lb PM generated/day [b]	65 9	(tons PM generated/yr) [c]	--	--
Aluminum	7429-90-5	0 64	(% of PM) [2]	0 64	(% of PM) [2]	12 8	12 8
Arsenic	7440-38-2	7 9E-04	(% of PM) [2]	7 9E-04	(% of PM) [2]	0 016	0 016
Barium	7440-39-3	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Beryllium	7440-41-7	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Cadmium	7440-43-9	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Chromium	7440-47-3	15 1	(% of PM) [2]	15 1	(% of PM) [2]	302	302
Chromium VI	18540-29-9	7 9E-05	(% of PM) [2]	7 9E-05	(% of PM) [2]	1 6E-03	1 6E-03
Cobalt	7440-48-4	3 59	(% of PM) [2]	3 59	(% of PM) [2]	71 8	71 8
Copper	7440-50-8	0 11	(% of PM) [2]	0 11	(% of PM) [2]	2 20	2 20
Lead	7439-92-1	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Manganese	7439-96-5	0 080	(% of PM) [2]	0 080	(% of PM) [2]	1 60	1 60
Mercury	7439-97-6	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Nickel	7440-02-0	41 0	(% of PM) [2]	41 0	(% of PM) [2]	820	820
Selenium	7782-49-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Silver	7440-22-4	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Vanadium	7440-62-2	7 2E-03	(% of PM) [2]	7 2E-03	(% of PM) [2]	0 14	0 14
Zinc	7440-66-6	4 6E-03	(% of PM) [2]	4 6E-03	(% of PM) [2]	0 092	0 092

Table D3
Source Group Emission Factors
PCC Structurals, Inc. - SSBO - PTE

TAC		Dust Analysis (units)				Emission Factor [a] (lb/ton PM generated)	
		Daily		Annual		Daily	Annual
Ingot Cutting	**BH 10193**	**307**	**(lb PM collected/day)** [1]	**56.1**	**(tons PM collected/yr)**	--	--
PM		307	lb PM generated/day [b]	56 1	(tons PM generated/yr) [c]	--	--
Aluminum	7429-90-5	0 60	(% of PM) [2]	0 60	(% of PM) [2]	12 0	12 0
Arsenic	7440-38-2	1 7E-03	(% of PM) [2]	1 7E-03	(% of PM) [2]	0 034	0 034
Barium	7440-39-3	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Beryllium	7440-41-7	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Cadmium	7440-43-9	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Chromium	7440-47-3	18 2	(% of PM) [2]	18 2	(% of PM) [2]	364	364
Chromium VI	18540-29-9	1 4E-04	(% of PM) [2]	1 4E-04	(% of PM) [2]	2 8E-03	2 8E-03
Cobalt	7440-48-4	11 8	(% of PM) [2]	11 8	(% of PM) [2]	236	236
Copper	7440-50-8	0 040	(% of PM) [2]	0 040	(% of PM) [2]	0 80	0 80
Lead	7439-92-1	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Manganese	7439-96-5	0 10	(% of PM) [2]	0 10	(% of PM) [2]	2 00	2 00
Mercury	7439-97-6	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Nickel	7440-02-0	42 2	(% of PM) [2]	42 2	(% of PM) [2]	844	844
Selenium	7782-49-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Silver	7440-22-4	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Vanadium	7440-62-2	7 1E-03	(% of PM) [2]	7 1E-03	(% of PM) [2]	0 14	0 14
Zinc	7440-66-6	3 2E-03	(% of PM) [2]	3 2E-03	(% of PM) [2]	0 064	0 064
Finishing, Sandblast	**BH 10194**	**311**	**(lb PM collected/day)** [1]	**56.7**	**(tons PM collected/yr)**	--	--
PM		311	lb PM generated/day [b]	56 7	(tons PM generated/yr) [c]	--	--
Aluminum	7429-90-5	1 80	(% of PM) [2]	1 80	(% of PM) [2]	36 0	36 0
Arsenic	7440-38-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Barium	7440-39-3	0 010	(% of PM) [2]	0 010	(% of PM) [2]	0 20	0 20
Beryllium	7440-41-7	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Cadmium	7440-43-9	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Chromium	7440-47-3	1 46	(% of PM) [2]	1 46	(% of PM) [2]	29 2	29 2
Chromium VI	18540-29-9	1 0E-05	(% of PM) [2]	1 0E-05	(% of PM) [2]	2 0E-04	2 0E-04
Cobalt	7440-48-4	0 36	(% of PM) [2]	0 36	(% of PM) [2]	7 20	7 20
Copper	7440-50-8	9 1E-03	(% of PM) [2]	9 1E-03	(% of PM) [2]	0 18	0 18
Lead	7439-92-1	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Manganese	7439-96-5	0 040	(% of PM) [2]	0 040	(% of PM) [2]	0 80	0 80
Mercury	7439-97-6	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Nickel	7440-02-0	3 79	(% of PM) [2]	3 79	(% of PM) [2]	75 8	75 8
Selenium	7782-49-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Silver	7440-22-4	1 1E-03	(% of PM) [2]	1 1E-03	(% of PM) [2]	0 022	0 022
Vanadium	7440-62-2	2 8E-03	(% of PM) [2]	2 8E-03	(% of PM) [2]	0 056	0 056
Zinc	7440-66-6	0 020	(% of PM) [2]	0 020	(% of PM) [2]	0 40	0 40
Investing #3	**BH 10482**	**31.2**	**(lb PM collected/day)** [1]	**5.70**	**(tons PM collected/yr)**	--	--
PM		31 2	lb PM generated/day [b]	5 70	(tons PM generated/yr) [c]	--	--
Aluminum	7429-90-5	12 0	(% of PM) [2]	12 0	(% of PM) [2]	240	240
Arsenic	7440-38-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Barium	7440-39-3	--	(% of PM) [2]	--	(% of PM) [2]	--	--
Beryllium	7440-41-7	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Cadmium	7440-43-9	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Chromium	7440-47-3	0 012	(% of PM) [2]	0 012	(% of PM) [2]	0 24	0 24
Chromium VI	18540-29-9	1 7E-05	(% of PM) [2]	1 7E-05	(% of PM) [2]	3 4E-04	3 4E-04
Cobalt	7440-48-4	7 0E-03	(% of PM) [2]	7 0E-03	(% of PM) [2]	0 14	0 14
Copper	7440-50-8	2 3E-03	(% of PM) [2]	2 3E-03	(% of PM) [2]	0 046	0 046
Lead	7439-92-1	4 8E-04	(% of PM) [2]	4 8E-04	(% of PM) [2]	9 6E-03	9 6E-03
Manganese	7439-96-5	2 1E-03	(% of PM) [2]	2 1E-03	(% of PM) [2]	0 042	0 042
Mercury	7439-97-6	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Nickel	7440-02-0	7 4E-03	(% of PM) [2]	7 4E-03	(% of PM) [2]	0 15	0 15
Selenium	7782-49-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Silver	7440-22-4	--	(% of PM) [2]	--	(% of PM) [2]	--	--
Vanadium	7440-62-2	0 012	(% of PM) [2]	0 012	(% of PM) [2]	0 24	0 24
Zinc	7440-66-6	4 2E-03	(% of PM) [2]	4 2E-03	(% of PM) [2]	0 084	0 084
Cleaning, Cutting	**BH 10498**	**1,381**	**(lb PM collected/day)** [1]	**252**	**(tons PM collected/yr)**	--	--
PM		1 381	lb PM generated/day [b]	252	(tons PM generated/yr) [c]	--	--
Aluminum	7429-90-5	0 71	(% of PM) [2]	0 71	(% of PM) [2]	14 2	14 2
Arsenic	7440-38-2	1 5E-03	(% of PM) [2]	1 5E-03	(% of PM) [2]	0 030	0 030
Barium	7440-39-3	4 6E-03	(% of PM) [2]	4 6E-03	(% of PM) [2]	0 092	0 092
Beryllium	7440-41-7	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Cadmium	7440-43-9	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Chromium	7440-47-3	15 6	(% of PM) [2]	15 6	(% of PM) [2]	312	312
Chromium VI	18540-29-9	1 0E-03	(% of PM) [2]	1 0E-03	(% of PM) [2]	0 020	0 020
Cobalt	7440-48-4	4 51	(% of PM) [2]	4 51	(% of PM) [2]	90 2	90 2
Copper	7440-50-8	0 030	(% of PM) [2]	0 030	(% of PM) [2]	0 60	0 60
Lead	7439-92-1	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Manganese	7439-96-5	0 090	(% of PM) [2]	0 090	(% of PM) [2]	1 80	1 80
Mercury	7439-97-6	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Nickel	7440-02-0	42 5	(% of PM) [2]	42 5	(% of PM) [2]	850	850
Selenium	7782-49-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Silver	7440-22-4	2 5E-03	(% of PM) [2]	2 5E-03	(% of PM) [2]	0 050	0 050
Vanadium	7440-62-2	6 9E-03	(% of PM) [2]	6 9E-03	(% of PM) [2]	0 14	0 14
Zinc	7440-66-6	2 9E-03	(% of PM) [2]	2 9E-03	(% of PM) [2]	0 058	0 058

Table D3
Source Group Emission Factors
PCC Structurals, Inc. - SSBO - PTE

TAC		Dust Analysis (units)				Emission Factor [a] (lb/ton PM generated)	
		Daily		Annual		Daily	Annual
Cleaning, Burnoff	**BH 10499**	**102**	**(lb PM collected/day)** [1]	**18.7**	**(tons PM collected/yr)**	--	--
PM		102	lb PM generated/day) [b]	18 7	(tons PM generated/yr) [c]	--	--
Aluminum	7429-90-5	0 23	(% of PM) [2]	0 23	(% of PM) [2]	4 60	4 60
Arsenic	7440-38-2	6 3E-04	(% of PM) [2]	6 3E-04	(% of PM) [2]	0 013	0 013
Barium	7440-39-3	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Beryllium	7440-41-7	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Cadmium	7440-43-9	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Chromium	7440-47-3	2 30	(% of PM) [2]	2 30	(% of PM) [2]	46 0	46 0
Chromium VI	18540-29-9	0 090	(% of PM) [2]	0 090	(% of PM) [2]	1 80	1 80
Cobalt	7440-48-4	2 56	(% of PM) [2]	2 56	(% of PM) [2]	51 2	51 2
Copper	7440-50-8	0 27	(% of PM) [2]	0 27	(% of PM) [2]	5 40	5 40
Lead	7439-92-1	2 9E-04	(% of PM) [2]	2 9E-04	(% of PM) [2]	5 8E-03	5 8E-03
Manganese	7439-96-5	0 080	(% of PM) [2]	0 080	(% of PM) [2]	1 60	1 60
Mercury	7439-97-6	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Nickel	7440-02-0	16 2	(% of PM) [2]	16 2	(% of PM) [2]	324	324
Selenium	7782-49-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Silver	7440-22-4	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Vanadium	7440-62-2	3 4E-03	(% of PM) [2]	3 4E-03	(% of PM) [2]	0 068	0 068
Zinc	7440-66-6	9 8E-03	(% of PM) [2]	9 8E-03	(% of PM) [2]	0 20	0 20
Cleaning, Shell Removal	**BH CLEAN**	**2,712**	**(lb PM collected/day)** [1]	**495**	**(tons PM collected/yr)**	--	--
PM		2 712	lb PM generated/day) [b]	495	(tons PM generated/yr) [c]	--	--
Aluminum	7429-90-5	2 62	(% of PM) [2]	2 62	(% of PM) [2]	52 4	52 4
Arsenic	7440-38-2	9 6E-04	(% of PM) [2]	9 6E-04	(% of PM) [2]	0 019	0 019
Barium	7440-39-3	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Beryllium	7440-41-7	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Cadmium	7440-43-9	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Chromium	7440-47-3	0 11	(% of PM) [2]	0 11	(% of PM) [2]	2 20	2 20
Chromium VI	18540-29-9	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Cobalt	7440-48-4	0 040	(% of PM) [2]	0 040	(% of PM) [2]	0 80	0 80
Copper	7440-50-8	0 040	(% of PM) [2]	0 040	(% of PM) [2]	0 80	0 80
Lead	7439-92-1	7 4E-03	(% of PM) [2]	7 4E-03	(% of PM) [2]	0 15	0 15
Manganese	7439-96-5	0 16	(% of PM) [2]	0 16	(% of PM) [2]	3 20	3 20
Mercury	7439-97-6	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Nickel	7440-02-0	0 18	(% of PM) [2]	0 18	(% of PM) [2]	3 60	3 60
Selenium	7782-49-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Silver	7440-22-4	1 7E-03	(% of PM) [2]	1 7E-03	(% of PM) [2]	0 034	0 034
Vanadium	7440-62-2	5 9E-03	(% of PM) [2]	5 9E-03	(% of PM) [2]	0 12	0 12
Zinc	7440-66-6	7 8E-03	(% of PM) [2]	7 8E-03	(% of PM) [2]	0 16	0 16
SSBI							
Finishing, Grinding	**BH 8628**	**11.0**	**(lb PM collected/day)** [1]	**2.00**	**(tons PM collected/yr)**	--	--
PM		11 0	lb PM generated/day) [b]	2 00	(tons PM generated/yr) [c]	--	--
Aluminum	7429-90-5	0 93	(% of PM) [2]	0 93	(% of PM) [2]	18 6	18 6
Arsenic	7440-38-2	1 2E-03	(% of PM) [2]	1 2E-03	(% of PM) [2]	0 024	0 024
Barium	7440-39-3	2 2E-03	(% of PM) [2]	2 2E-03	(% of PM) [2]	0 044	0 044
Beryllium	7440-41-7	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Cadmium	7440-43-9	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Chromium	7440-47-3	15 9	(% of PM) [2]	15 9	(% of PM) [2]	318	318
Chromium VI	18540-29-9	1 3E-04	(% of PM) [2]	1 3E-04	(% of PM) [2]	2 6E-03	2 6E-03
Cobalt	7440-48-4	6 30	(% of PM) [2]	6 30	(% of PM) [2]	126	126
Copper	7440-50-8	0 13	(% of PM) [2]	0 13	(% of PM) [2]	2 60	2 60
Lead	7439-92-1	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Manganese	7439-96-5	0 080	(% of PM) [2]	0 080	(% of PM) [2]	1 60	1 60
Mercury	7439-97-6	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Nickel	7440-02-0	35 6	(% of PM) [2]	35 6	(% of PM) [2]	712	712
Selenium	7782-49-2	0 010	(% of PM) [2]	0 010	(% of PM) [2]	0 20	0 20
Silver	7440-22-4	1 7E-03	(% of PM) [2]	1 7E-03	(% of PM) [2]	0 034	0 034
Vanadium	7440-62-2	0 020	(% of PM) [2]	0 020	(% of PM) [2]	0 40	0 40
Zinc	7440-66-6	0 040	(% of PM) [2]	0 040	(% of PM) [2]	0 80	0 80
Finishing, Sandblast	**BH 8629**	**374**	**(lb PM collected/day)** [1]	**68.2**	**(tons PM collected/yr)**	--	--
PM		374	lb PM generated/day) [b]	68 3	(tons PM generated/yr) [c]	--	--
Aluminum	7429-90-5	2 13	(% of PM) [2]	2 13	(% of PM) [2]	42 6	42 6
Arsenic	7440-38-2	6 3E-04	(% of PM) [2]	6 3E-04	(% of PM) [2]	0 013	0 013
Barium	7440-39-3	9 0E-03	(% of PM) [2]	9 0E-03	(% of PM) [2]	0 18	0 18
Beryllium	7440-41-7	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Cadmium	7440-43-9	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Chromium	7440-47-3	10 2	(% of PM) [2]	10 2	(% of PM) [2]	204	204
Chromium VI	18540-29-9	1 2E-05	(% of PM) [2]	1 2E-05	(% of PM) [2]	2 4E-04	2 4E-04
Cobalt	7440-48-4	2 11	(% of PM) [2]	2 11	(% of PM) [2]	42 2	42 2
Copper	7440-50-8	0 040	(% of PM) [2]	0 040	(% of PM) [2]	0 80	0 80
Lead	7439-92-1	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Manganese	7439-96-5	0 050	(% of PM) [2]	0 050	(% of PM) [2]	1 00	1 00
Mercury	7439-97-6	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Nickel	7440-02-0	27 8	(% of PM) [2]	27 8	(% of PM) [2]	556	556
Selenium	7782-49-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Silver	7440-22-4	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Vanadium	7440-62-2	5 2E-03	(% of PM) [2]	5 2E-03	(% of PM) [2]	0 10	0 10
Zinc	7440-66-6	8 6E-03	(% of PM) [2]	8 6E-03	(% of PM) [2]	0 17	0 17

Table D3
Source Group Emission Factors
PCC Structurals, Inc. - SSBO - PTE

TAC		Dust Analysis (units)				Emission Factor [a] (lb/ton PM generated)	
		Daily		Annual		Daily	Annual
Cleaning, Burnoff	**BH 9164**	**2.19**	**(lb PM collected/day) [1]**	**0.40**	**(tons PM collected/yr)**	--	--
PM		2 19	lb PM generated/day [b]	0 40	(tons PM generated/yr) [c]	--	--
Aluminum	7429-90-5	0 16	(% of PM) [2]	0 16	(% of PM) [2]	3 20	3 20
Arsenic	7440-38-2	1 6E-03	(% of PM) [2]	1 6E-03	(% of PM) [2]	0 032	0 032
Barium	7440-39-3	1 0E-03	(% of PM) [2]	1 0E-03	(% of PM) [2]	0 020	0 020
Beryllium	7440-41-7	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Cadmium	7440-43-9	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Chromium	7440-47-3	3 77	(% of PM) [2]	3 77	(% of PM) [2]	75 4	75 4
Chromium VI	18540-29-9	0 14	(% of PM) [2]	0 14	(% of PM) [2]	2 80	2 80
Cobalt	7440-48-4	0 36	(% of PM) [2]	0 36	(% of PM) [2]	7 20	7 20
Copper	7440-50-8	1 77	(% of PM) [2]	1 77	(% of PM) [2]	35 4	35 4
Lead	7439-92-1	4 1E-04	(% of PM) [2]	4 1E-04	(% of PM) [2]	8 2E-03	8 2E-03
Manganese	7439-96-5	0 33	(% of PM) [2]	0 33	(% of PM) [2]	6 60	6 60
Mercury	7439-97-6	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Nickel	7440-02-0	8 50	(% of PM) [2]	8 50	(% of PM) [2]	170	170
Selenium	7782-49-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Silver	7440-22-4	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Vanadium	7440-62-2	7 8E-03	(% of PM) [2]	7 8E-03	(% of PM) [2]	0 16	0 16
Zinc	7440-66-6	0 020	(% of PM) [2]	0 020	(% of PM) [2]	0 40	0 40
Finishing	**BH 9439**	**553**	**(lb PM collected/day) [1]**	**101**	**(tons PM collected/yr)**	--	--
PM		553	lb PM generated/day [b]	101	(tons PM generated/yr) [c]	--	--
Aluminum	7429-90-5	2 13	(% of PM) [2]	2 13	(% of PM) [2]	42 6	42 6
Arsenic	7440-38-2	6 3E-04	(% of PM) [2]	6 3E-04	(% of PM) [2]	0 013	0 013
Barium	7440-39-3	9 0E-03	(% of PM) [2]	9 0E-03	(% of PM) [2]	0 18	0 18
Beryllium	7440-41-7	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Cadmium	7440-43-9	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Chromium	7440-47-3	10 2	(% of PM) [2]	10 2	(% of PM) [2]	204	204
Chromium VI	18540-29-9	1 2E-05	(% of PM) [2]	1 2E-05	(% of PM) [2]	2 4E-04	2 4E-04
Cobalt	7440-48-4	2 11	(% of PM) [2]	2 11	(% of PM) [2]	42 2	42 2
Copper	7440-50-8	0 040	(% of PM) [2]	0 040	(% of PM) [2]	0 80	0 80
Lead	7439-92-1	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Manganese	7439-96-5	0 050	(% of PM) [2]	0 050	(% of PM) [2]	1 00	1 00
Mercury	7439-97-6	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Nickel	7440-02-0	27 8	(% of PM) [2]	27 8	(% of PM) [2]	556	556
Selenium	7782-49-2	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Silver	7440-22-4	ND	(% of PM) [2]	ND	(% of PM) [2]	ND	ND
Vanadium	7440-62-2	5 2E-03	(% of PM) [2]	5 2E-03	(% of PM) [2]	0 10	0 10
Zinc	7440-66-6	8 6E-03	(% of PM) [2]	8 6E-03	(% of PM) [2]	0 17	0 17

Filter	Control Efficiency (%) [1]
Baghouse Control Efficiency for PM - No HEPA/ULPA (%)	99 9
Combined Baghouse + HEPA Control Efficiency	99 99997
Combined Baghouse + ULPA Control Efficiency	99 999999

NOTES:

ND = all analysis results were below the method detection limit

(a) Emission factor (lb/ton PM generated) = (percentage of PM [% of PM]/100) x (2 000 lb/ton)

(b) Maximum daily PM generated (lb PM generated/day) = (maximum daily PM collected [lb PM collected/day]) + (maximum daily PM collected [lb PM collected/day]) x (1- baghouse control efficiency [%]/100)

(c) Annual PM generated (tons PM generated/yr) = (annual PM collected [tons PM collected/yr]) + (annual PM collected [tons PM collected/yr]) x (1- baghouse control efficiency [%]/100)

REFERENCES:

(1) See Table D4 Master Throughput and Production Rates

(2) See Table D2 Baghouse Data

Table D4
Master Throughput and Production Rates
PCC Structurals, Inc. - SSBO - PTE

Source	Production or Throughput (units)							
	2021				PTE			
	Daily		Annual		Daily		Annual	
SSBO-Total								
Total Metal Poured for Parts & Gating (Metal Poured)	8 301 (lb/day) [a]		1 515 (tons/yr) [1]		49 315 (lb/day) [a]		9 000 (tons/yr) [1]	
Casting								
Total Metal Poured for Air Casting Parts & Gating (Metal Poured)	3 030 (lb/day) [b]		303 (tons/yr) [2]		16 438 (lb/day) [a]		3 000 (tons/yr) [2]	
Total Metal Poured for Vacuum Casting Parts & Gating (Metal Poured)	6 641 (lb/day) [a]		1 212 (tons/yr) [2]		32 877 (lb/day) [a]		6 000 (tons/yr) [2]	
Metal Poured for Vacuum Casting Parts - Dry Pump Furnaces (Metal Poured)	997 (lb/day) [a]		182 (tons/yr) [c]		32 877 (lb/day) [a]		6 000 (tons/yr) [3]	
Metal Poured for Vacuum Casting Parts - Oil Pump Furnaces (Metal Poured)	5 644 (lb/day) [a]		1 030 (tons/yr) [d]		--		--	
Molten Metal Insulation (Hot Top Used)								
Baghouses								
Baghouses, SSBO								
Baghouse 2017 - Cleaning Shell Removal (Dust Collected) [4]	345 (lb/day) [a]		63 0 (tons/yr) [5]		--		--	
Baghouse 2046 - Investing #1 (Dust Collected)	60 3 (lb/day) [a]		11 0 (tons/yr) [5]		358 (lb/day) [a]		65 3 (tons/yr) [6]	
Baghouse 4448 - Investing #2 (Dust Collected)	1 97 (lb/day) [a]		0 36 (tons/yr) [5]		31 2 (lb/day) [a]		5 70 (tons/yr) [6]	
Baghouse 4718 - Cleaning Cutting (Dust Collected) [4]	116 (lb/day) [a]		21 2 (tons/yr) [5]		--		--	
Baghouse 8195 - Finishing Inspection (Dust Collected)	1 81 (lb/day) [a]		0 33 (tons/yr) [5]		11 0 (lb/day) [a]		2 00 (tons/yr) [6]	
Baghouse 9338 - Finishing Rework Grinding (Dust Collected)	60 8 (lb/day) [a]		11 1 (tons/yr) [5]		361 (lb/day) [a]		65 9 (tons/yr) [6]	
Baghouse 10193 - Ingot Cutting (Dust Collected)	51 8 (lb/day) [a]		9 45 (tons/yr) [5]		307 (lb/day) [a]		56 1 (tons/yr) [6]	
Baghouse 10194 - Finishing Sandblast (Dust Collected)	52 3 (lb/day) [a]		9 54 (tons/yr) [5]		311 (lb/day) [a]		56 7 (tons/yr) [6]	
Baghouse 10482 - Investing #3 Dust Collected) [7]	--		--		31 2 (lb/day) [a]		5 70 (tons/yr) [8]	
Baghouse 10498 - Cleaning Cutting (Dust Collected)	116 (lb/day) [a]		21 2 (tons/yr) [5]		1 381 (lb/day) [a]		252 (tons/yr) [8]	
Baghouse 10499 - Cleaning Burnoff (Dust Collected)	17 3 (lb/day) [a]		3 15 (tons/yr) [5]		102 (lb/day) [a]		18 7 (tons/yr) [6]	
Baghouse CLEAN - Cleaning Shell Removal (Dust Collected) [7]	--		--		2 712 (lb/day) [a]		495 (tons/yr) [8]	
Baghouses, SSB1								
Baghouse 8628 - Finishing Grinding (Dust Collected)	1 81 (lb/day) [a]		0 33 (tons/yr) [5]		11 0 (lb/day) [a]		2 00 (tons/yr) [6]	
Baghouse 8629 - Finishing Sandblast (Dust Collected)	12 8 (lb/day) [a]		2 34 (tons/yr) [5]		374 (lb/day) [a]		68 2 (tons/yr) [6]	
Baghouse 9164 - Cleaning Burnoff Dust Collected)	0 (lb/day) [a]		0 (tons/yr) [5]		2 19 (lb/day) [a]		0 40 (tons/yr) [6]	
Baghouse 9439 - Finishing (Dust Collected) [9]	--		--		553 (lb/day) [a]		101 (tons/yr) [6]	
Autoclave								
Autoclave LPC-S								
Wax								
SLA								
Investing								
Thermal Oxidizer Downtime Hours	24 0 (hrs/day) [2]		50 0 (hrs/yr) [2]		24 0 (hrs/day) [2]		80 0 (hrs/yr) [2]	
Thermal Oxidizer Operational Hours	24 0 (hrs/day) [2]		8 710 (hrs/yr) [2]		24 0 (hrs/day) [2]		8 680 (hrs/yr) [2]	
Heat Treat								
Total Air Cast Superalloy Heat Treated Parts (Metal Processed)	1 515 (lb/day) [b]		152 (tons/yr) [g]		8 219 (lb/day) [a]		1 500 (tons/yr) [g]	
Total Vacuum Cast Superalloy Heat Treated Parts (Metal Processed)	3 321 (lb/day) [a]		606 (tons/yr) [g]		16 438 (lb/day) [a]		3 000 (tons/yr) [g]	
Heat Treat, SSBO								
Vacuum/Electric Heat-Treat Furnace (Metal Processed)	2 128 (lb/day) [h]		333 (tons/yr) [h]		10 849 (lb/day) [a]		1 980 (tons/yr) [h]	
Natural Gas Heat-Treat Furnace (Metal Processed)	1 257 (lb/day) [ ]		197 (tons/yr) [i]		6 411 (lb/day) [a]		1 170 (tons/yr) [i]	
Heat Treat, SSB1								
Vacuum/Electric Heat-Treat Furnace (Metal Processed)	725 (lb/day) [h]		114 (tons/yr) [h]		3 699 (lb/day) [a]		675 (tons/yr) [h]	
Natural Gas Heat-Treat Furnace (Metal Processed)	725 (lb/day) [ ]		114 (tons/yr) [i]		3 699 (lb/day) [a]		675 (tons/yr) [i]	
Welding								
Welding, SSBO								
Welding SSB1								
Miscellaneous								
Maintenance Shop (Exempt TEU)								
Cooling Towers (Exempt TEU) - sodium hydroxide is a dissolved salt used to manage cooling tower water and is expected to have a negligible contribution to drift loss.								
Wastewater - Treatment system design enclosed. No emissions to atmosphere.								
Natural Gas Usage								
Total Facility Natural Gas Usage	0 41 (MMscf/day) [e]		148 (MMscf/yr) [2]		2 15 (MMscf/day) [e]		784 (MMscf/yr) [2]	
Total Natural Gas Usage - SSBO	0 39 (MMscf/day) [e]		144 (MMscf/yr) [2]		2 08 (MMscf/day) [e]		761 (MMscf/yr) [12]	
Total Natural Gas Usage - SSB1	0 011 (MMscf/day) [e]		4 00 (MMscf/yr) [2]		0 063 (MMscf/day) [e]		23 0 (MMscf/yr) [12]	

All notes and references are provided on the following page

Table D4 (continued)
Master Throughput and Production Rates
PCC Structurals, Inc. - SSBO - PTE

Miscellaneous	Parameter	
Annual Days of Operation (days/yr)	365	(13)
Percentage of Metal Poured for Gating (%)	50 0	(14)
2021 Annual Days of Operation (days/yr)	365	(2)
2021 Annual Days of Operation - Air Casting (days/yr)	200	(2)
Baghouse Control Efficiency for PM - No HEPA/ULPA (%)	99 9	(15)
Control Efficiency for PM - HEPA (%)	99 97	(15)
Combined Baghouse + HEPA Control Efficiency	99 99997	(l)
Control Efficiency for PM - ULPA (%)	99 999	(15)
Combined Baghouse + ULPA Control Efficiency	99 999999	(l)
Thermal Oxidizer Destruction Efficiency for Organics - Investing (%)	97 0	(16)
Thermal Oxidizer Destruction Efficiency - Burnout Oven (%)	95 0	(17)
Percentage of Welding Wire to Waste (%)	20 0	(18)
SSBO		
Percentage of Vacuum Casting Parts - VF6 (%)	15 0	(2)
Percentage of Total Backend Operations (%)	70 0	(18)
Percentage of Total Heat Treat in Vacuum/Electric Heat-Treat Furnace (%)	44 0	(19)
Percentage of Total Heat Treat in Natural Gas Heat-Treat Furnace (%)	26 0	(19)
Percentage of Total Welding Activities Controlled - 2021(%)	33 0	(20)
Percentage of Total Welding Activities Controlled - PTE (%)	33 0	(20)
SSB1		
Percentage of Total Backend Operations (%)	30 0	(18)
Percentage of Total Heat Treat in Vacuum/Electric Heat-Treat Furnace (%)	15 0	(21)
Percentage of Total Heat Treat in Natural Gas Heat-Treat Furnace (%)	15 0	(21)
Percentage of Total Welding Activities Controlled - 2021(%)	40 0	(20)
Percentage of Total Welding Activities Controlled - PTE (%)	100	(20)

NOTES:

(a) Maximum daily parameter (lb/day) = (annual parameter [tons/yr]) / (annual days of operation [days/yr]) x (2000 lb/ton)
(b) Maximum daily parameter (lb/day) = (annual parameter [tons/yr]) / (2021 annual days of operation - air casting [days/yr]) x (2000 lb/ton)
(c) Annual metal poured for vacuum casting parts - dry pump furnaces (tons metal poured/yr) = (annual total metal poured for vacuum casting parts & gating [tons metal poured/yr]) x (percentage of vacuum casting parts - VF6 [%]/100)
(d) Annual metal poured for vacuum casting parts - oil pump furnaces (tons metal poured/yr) = (annual total metal poured for vacuum casting parts & gating [tons metal poured/yr]) x (1 - [percentage of vacuum casting parts - VF6 {%}]/100)
(e) Maximum daily parameter (unit /day) = (annual parameter [unit /yr]) / (annual days of operation [days/yr])
(f) Annual parameter PTE (unit /yr) = (metal poured for parts and gating PTE [tons metal poured/yr]) / (metal poured for parts and gating 2021 [tons metal poured/yr]) x (annual parameter 2021 [unit /yr])
(g) Total cast superalloy heat treated (tons metal processed/yr) = (casting parts and gating [tons metal poured/yr]) x (1 - [percentage of metal poured for gating {%}/100])
h) Vacuum/electric heat-treat (lb metal processed/day or tons metal processed/yr) = ([total air cast superalloy heat treated {lb metal processed/day or tons metal processed/yr}] + [total vacuum cast superalloy heat treated {lb metal processed/day or tons metal processed/yr}]) x (SSBO or SSB1 percentage of total heat treat in vacuum/electric heat-treat furnace [%]/100)
(i) Natural gas heat-treat lb metal processed/day or tons metal processed/yr) = ([total air cast superalloy heat treated {lb metal processed/day or tons metal processed/yr}] + [total vacuum cast superalloy heat treated {lb metal processed/day or tons metal processed/yr}]) x (SSBO or SSB1 percentage of total heat treat in natural gas heat-treat furnace [%]/100)
(j) Total weld wire usage - excluding waste - controlled (lb/yr) = (total weld wire usage [lb/yr]) x (percentage of total welding activities controlled [%]/100)
k) Total weld wire usage - excluding waste - uncontrolled lb/yr) = (total weld wire usage [lb/yr]) x (1 - [percentage of total welding activities controlled {%}]/100) x (1 - [percentage of welding wire to waste {%}]
(l) Combined baghouse + HEPA/ULPA control efficiency (%) = (1 - [1 - {control efficiency for PM - HEPA/ULPA (%)/100}] x [1 - {baghouse control efficiency for PM - no HEPA/ULPA (%)/100}]) x 100

REFERENCES:

(1) Metal poured for parts and gating is the sum of air casting parts and gating and vacuum casting parts and gating
(2) Production data provided by facility
(3) All vacuum furnaces are to be equipped with dry pumps in the future
(4) Baghouse removed from service and equipment re-routed to other baghouses for PTE
(5) Amount of material collected from baghouse in 2021
(6) PTE estimate based on previous dust collection data and scaled based on total production (metal poured)
(7) Baghouse was not yet in service in 2021
(8) PTE baghouse collection estimate based on historical collection data and the types and amount of equipment serviced
(9) Baghouse was internally vented in 2021 but will vent externally in the future
(10) Assumes value for total metal poured for parts and gating
(11) Welding emissions controlled by baghouse
(12) Total PTE natural gas usage apportioned to individual facility locations based on historical usage
(13) Assumes continuous facility operation
(14) Information provided by facility based on mold configuration
(15) Information provided by facility based on manufacturer data
(16) See Standard ACDP number 03-2674-ST-01 issued September 7 2007 Minimum VOC destruction efficiency
(17) Engineering estimate based on high temperature oxidizers
(18) Information provided by facility based on typical production activities
(19) Based on eight heat treat furnaces at SSBO Five heat treat furnaces are vacuum/electric and three are natural gas
(20) Information provided by facility based on typical production activities and the percentage of welding stations that are vented to a baghouse
(21) Split throughput evenly between vacuum/electric and natural gas heat treat furnaces

Table 1
SSBO - Air Casting Parts - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS/ODEQ ID	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor				Total Emissions Estimate	
				Daily		Annual		Maximum Daily (lb/day)	Annual (lb/yr)
PM	--	--	--	0.207	(lb/ton metal poured) (1)	0.207	(lb/ton metal poured) (1)	1.70 (a)	621 (b)
Aluminum	7429-90-5	No	13	25.0	(% of PM emitted) (3)	19.0	(% of PM emitted) (3)	0.43 (c)	118 (d)
Arsenic	7440-38-2	Yes	37	2.3E-03	(% of PM emitted) (3)	1.8E-03	(% of PM emitted) (3)	3.9E-05 (c)	0.011 (d)
Beryllium	7440-41-7	Yes	58	ND	(% of PM emitted) (3)	ND	(% of PM emitted) (3)	-- (c)	-- (d)
Cadmium	7440-43-9	Yes	83	ND	(% of PM emitted) (3)	ND	(% of PM emitted) (3)	-- (c)	-- (d)
Chromium	7440-47-3	Yes	--	1.40	(% of PM emitted) (3)	1.20	(% of PM emitted) (3)	0.024 (c)	7.45 (d)
Chromium VI	18540-29-9	Yes	136	6.0E-05	(% of PM emitted) (3)	1.4E-05	(% of PM emitted) (3)	1.0E-06 (c)	8.7E-05 (d)
Cobalt	7440-48-4	Yes	146	0.065	(% of PM emitted) (3)	0.053	(% of PM emitted) (3)	1.1E-03 (c)	0.33 (d)
Copper	7440-50-8	No	149	1.30	(% of PM emitted) (3)	1.30	(% of PM emitted) (3)	0.022 (c)	8.07 (d)
Lead	7439-92-1	Yes	305	0.013	(% of PM emitted) (3)	0.010	(% of PM emitted) (3)	2.2E-04 (c)	0.062 (d)
Manganese	7439-96-5	Yes	312	1.70	(% of PM emitted) (3)	1.30	(% of PM emitted) (3)	0.029 (c)	8.07 (d)
Nickel	7440-02-0	Yes	364	0.72	(% of PM emitted) (3)	0.63	(% of PM emitted) (3)	0.012 (c)	3.91 (d)
Selenium	7782-49-2	Yes	575	2.5E-03	(% of PM emitted) (3)	1.6E-03	(% of PM emitted) (3)	4.3E-05 (c)	9.9E-03 (d)
Vanadium	7440-62-2	No	620	6.9E-03	(% of PM emitted) (3)	5.8E-03	(% of PM emitted) (3)	1.2E-04 (c)	0.036 (d)
Zinc	7440-66-6	No	632	1.70	(% of PM emitted) (3)	1.20	(% of PM emitted) (3)	0.029 (c)	7.45 (d)

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (emission factor [lb/ton metal poured]) x (maximum daily metal poured for parts and gating [lb metal poured/day]) x (ton/2,000 lb)

Maximum daily metal poured for air casting parts and gating (lb metal poured/day) = 16,438 (2)

(b) Annual emissions estimate (lb/yr) = (emission factor [lb/ton metal poured]) x (annual metal poured for parts and gating [ton metal poured/yr])

Annual metal poured for air casting parts and gating (ton metal poured/yr) = 3,000 (2)

(c) Maximum daily emissions estimate (lb/day) = (maximum daily PM emissions [lb/day]) x (emission factor [% of PM emitted]/100)

(d) Annual emissions estimate (lb/yr) = (annual PM emissions [lb/yr]) x (emission factor [% of PM emitted]/100)

REFERENCES:

(1) Engineering estimate based on engineering testing.

(2) See Table D4, Master Throughput and Production Rates.

(3) Based on a summary of baghouse dust analyses from LPC baghouse 9256 from multiple years. Where more than one analysis was performed, annual values are calculated based on an average of analysis results, and 24-hour values are based on the maximum values from the individual analysis results.

Table 2
SSBO - Vacuum Casting Parts - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS/ODEQ ID	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor		Total Emissions Estimate	
				Daily	Annual	Maximum Daily (lb/day)	Annual (lb/yr)
PM	--	--	--	5.7E-03 (lb/ton metal poured) [1]	5.7E-03 (lb/ton metal poured) [1]	9.4E-10 [a]	3.4E-07 [b]
Aluminum	7429-90-5	No	13	[redacted]	[redacted]	5.9E-11 [c]	7.0E-09 [d]
Antimony	7440-36-0	Yes	33	[redacted]	[redacted]	1.9E-15 [c]	2.2E-14 [d]
Arsenic	7440-38-2	Yes	37	[redacted]	[redacted]	3.7E-13 [c]	4.4E-12 [d]
Chromium Compounds	7440-47-3	Yes	--	[redacted]	[redacted]	1.9E-11 [c]	1.8E-09 [d]
Chromium VI	18540-29-9	Yes	136	[redacted]	[redacted]	3.7E-14 [c]	3.4E-12 [d]
Cobalt	7440-48-4	Yes	146	[redacted]	[redacted]	6.9E-10 [c]	5.0E-08 [d]
Copper	7440-50-8	No	149	[redacted]	[redacted]	1.9E-11 [c]	2.5E-10 [d]
Lead	7439-92-1	Yes	305	[redacted]	[redacted]	9.4E-14 [c]	1.7E-12 [d]
Manganese	7439-96-5	Yes	312	[redacted]	[redacted]	5.8E-10 [c]	4.3E-09 [d]
Mercury	7439-97-6	Yes	316	[redacted]	[redacted]	2.3E-14 [c]	3.4E-13 [d]
Molybdenum trioxide	1313-27-5	No	361	[redacted]	[redacted]	2.7E-12 [c]	2.2E-10 [d]
Nickel	7440-02-0	Yes	364	[redacted]	[redacted]	6.8E-10 [c]	1.7E-07 [d]
Nickel oxide	1313-99-1	Yes	366	[redacted]	[redacted]	2.1E-11 [c]	5.1E-09 [d]
Phosphorus	504	Yes	504	[redacted]	[redacted]	4.7E-13 [c]	2.4E-11 [d]
Selenium	7782-49-2	Yes	575	[redacted]	[redacted]	2.3E-14 [c]	3.4E-13 [d]
Silver	7440-22-4	No	580	[redacted]	[redacted]	4.7E-15 [c]	3.2E-13 [d]
Thallium	7440-28-0	No	595	[redacted]	[redacted]	2.3E-15 [c]	6.8E-14 [d]
Vanadium	7440-62-2	No	620	[redacted]	[redacted]	4.7E-13 [c]	5.8E-11 [d]

NOTES:

[redacted]

REFERENCES:

(1) AP-42 Chapter 12.13 Table 12.13-2 Emission Factors for Steel Foundries." AP-42 emission factor for electric induction furnace has been adjusted to reflect the vacuum casting process.
Assumes 95% control for melting emission factor due to minimal venting during melt process.
Assumes 100% control for the pouring emission factor due to no venting of the vacuum furnace during the pour and cast process.
Assumes 95% control for cooling emission factor due to inherent benefit of mold configuration and an additional 99% control due to covering the part upon removal from the furnace.

(2) See Table D4 Master Throughput and Production Rates.

[redacted]

Table 3
SSBO - Hot Top - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	[redacted]	Total Emissions Estimate	
					Maximum Daily [b] (lb/day)	Annual [c] (lb/yr)
Aluminum	7429-90-5	No	13		0.92	336

NOTES:

[redacted]

REFERENCES:

(1) Information from product SDS. SDS is confidential business information.
(2) Based on bench scale testing.
(3) See Table D4, Master Throughput and Production Rates.

Table 4
SSBO - Autoclave and Wax Reclaim - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	[redacted]	Total Emissions Estimate	
					Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Benzene	71-43-2	Yes	46		0.074	27.0
Methyl methacrylate	80-62-6	Yes	339		0.52	189
Styrene	100-42-5	Yes	585		0.025	9.00
Toluene	108-88-3	Yes	600		0.12	45.0

NOTES:

[redacted]

REFERENCES:

(1) Based on engineering estimate.

(2) See Table D4, Master Throughput and Production Rates.

Table 5
SSBO - Investing #1 - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton PM generated)		Total Emissions Estimate	
				Daily	Annual	Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	240	240	0.043	15.7
Arsenic	7440-38-2	Yes	37	ND	ND	--	--
Beryllium	7440-41-7	Yes	58	ND	ND	--	--
Cadmium	7440-43-9	Yes	83	ND	ND	--	--
Chromium	7440-47-3	Yes	--	0.24	0.24	4.3E-05	0.016
Chromium VI	18540-29-9	Yes	136	3.4E-04	3.4E-04	6.1E-08	2.2E-05
Cobalt	7440-48-4	Yes	146	0.14	0.14	2.5E-05	9.2E-03
Copper	7440-50-8	No	149	0.046	0.046	8.2E-06	3.0E-03
Lead	7439-92-1	Yes	305	9.6E-03	9.6E-03	1.7E-06	6.3E-04
Manganese	7439-96-5	Yes	312	0.042	0.042	7.5E-06	2.7E-03
Mercury	7439-97-6	Yes	316	ND	ND	--	--
Nickel	7440-02-0	Yes	364	0.15	0.15	2.7E-05	9.7E-03
Selenium	7782-49-2	Yes	575	ND	ND	--	--
Vanadium	7440-62-2	No	620	0.24	0.24	4.3E-05	0.016
Zinc	7440-66-6	No	632	0.084	0.084	1.5E-05	5.5E-03

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (maximum daily PM generated [lb/day]) x (emission factor [lb/ton PM generated]) x (ton/2,000 lb) x (1 - [baghouse control efficiency {%}]/100)

Maximum daily PM generated (lb PM generated/day) = 358 (1)

Baghouse 2046 control efficiency (%) = 99.9 (2)

(b) Annual emissions estimate (lb/yr) = (annual PM generated [ton/yr]) x (emission factor [lb/ton PM generated]) x (1 - [baghouse control efficiency {%}]/100)

Annual PM generated (tons PM generated/yr) = 65.4 (1)

Baghouse 2046 control efficiency (%) = 99.9 (2)

REFERENCES:

(1) See Table D3, Source Group Emission Factors.

(2) See Table D4, Master Throughput and Production Rates.

Table 6
SSBO - Investing #2 - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton PM generated)		Total Emissions Estimate	
				Daily	Annual	Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	240	240	3.8E-03	1.37
Arsenic	7440-38-2	Yes	37	ND	ND	--	--
Beryllium	7440-41-7	Yes	58	ND	ND	--	--
Cadmium	7440-43-9	Yes	83	ND	ND	--	--
Chromium	7440-47-3	Yes	--	0.24	0.24	3.8E-06	1.4E-03
Chromium VI	18540-29-9	Yes	136	3.4E-04	3.4E-04	5.3E-09	1.9E-06
Cobalt	7440-48-4	Yes	146	0.14	0.14	2.2E-06	8.0E-04
Copper	7440-50-8	No	149	0.046	0.046	7.2E-07	2.6E-04
Lead	7439-92-1	Yes	305	9.6E-03	9.6E-03	1.5E-07	5.5E-05
Manganese	7439-96-5	Yes	312	0.042	0.042	6.6E-07	2.4E-04
Mercury	7439-97-6	Yes	316	ND	ND	--	--
Nickel	7440-02-0	Yes	364	0.15	0.15	2.3E-06	8.4E-04
Selenium	7782-49-2	Yes	575	ND	ND	--	--
Vanadium	7440-62-2	No	620	0.24	0.24	3.8E-06	1.4E-03
Zinc	7440-66-6	No	632	0.084	0.084	1.3E-06	4.8E-04

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (maximum daily PM generated [lb/day]) x (emission factor [lb/ton PM generated]) x (ton/2,000 lb) x (1 - [baghouse control efficiency {%}]/100)

Maximum daily PM generated (lb PM generated/day) = 31.3 (1)

Baghouse 4448 control efficiency (%) = 99.9 (2)

(b) Annual emissions estimate (lb/yr) = (annual PM generated [ton/yr]) x (emission factor [lb/ton PM generated]) x (1 - [baghouse control efficiency {%}]/100)

Annual PM generated (tons PM generated/yr) = 5.71 (1)

Baghouse 4448 control efficiency (%) = 99.9 (2)

REFERENCES:

(1) See Table D3, Source Group Emission Factors.

(2) See Table D4, Master Throughput and Production Rates.

Table 7
SSBO - Investing #3 (ULPA) - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton PM generated)		Total Emissions Estimate	
				Daily	Annual	Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	240	240	3.7E-08	1.4E-05
Arsenic	7440-38-2	Yes	37	ND	ND	--	--
Beryllium	7440-41-7	Yes	58	ND	ND	--	--
Cadmium	7440-43-9	Yes	83	ND	ND	--	--
Chromium	7440-47-3	Yes	--	0.24	0.24	3.7E-11	1.4E-08
Chromium VI	18540-29-9	Yes	136	3.4E-04	3.4E-04	5.3E-14	1.9E-11
Cobalt	7440-48-4	Yes	146	0.14	0.14	2.2E-11	8.0E-09
Copper	7440-50-8	No	149	0.046	0.046	7.2E-12	2.6E-09
Lead	7439-92-1	Yes	305	9.6E-03	9.6E-03	1.5E-12	5.5E-10
Manganese	7439-96-5	Yes	312	0.042	0.042	6.6E-12	2.4E-09
Mercury	7439-97-6	Yes	316	ND	ND	--	--
Nickel	7440-02-0	Yes	364	0.15	0.15	2.3E-11	8.4E-09
Selenium	7782-49-2	Yes	575	ND	ND	--	--
Vanadium	7440-62-2	No	620	0.24	0.24	3.7E-11	1.4E-08
Zinc	7440-66-6	No	632	0.084	0.084	1.3E-11	4.8E-09

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (maximum daily PM generated [lb/day]) x (emission factor [lb/ton PM generated]) x (ton/2,000 lb) x (1 - [baghouse control efficiency {%}]/100)

Maximum daily PM generated (lb PM generated/day) = 31.2 (1)

Baghouse 10482 control efficiency (%) = 99.999999 (2)

(b) Annual emissions estimate (lb/yr) = (annual PM generated [ton/yr]) x (emission factor [lb/ton PM generated]) x (1 - [baghouse control efficiency {%}]/100)

Annual PM generated (tons PM generated/yr) = 5.70 (1)

Baghouse 10482 control efficiency (%) = 99.999999 (2)

REFERENCES:

(1) See Table D3, Source Group Emission Factors.

(2) See Table D4, Master Throughput and Production Rates.

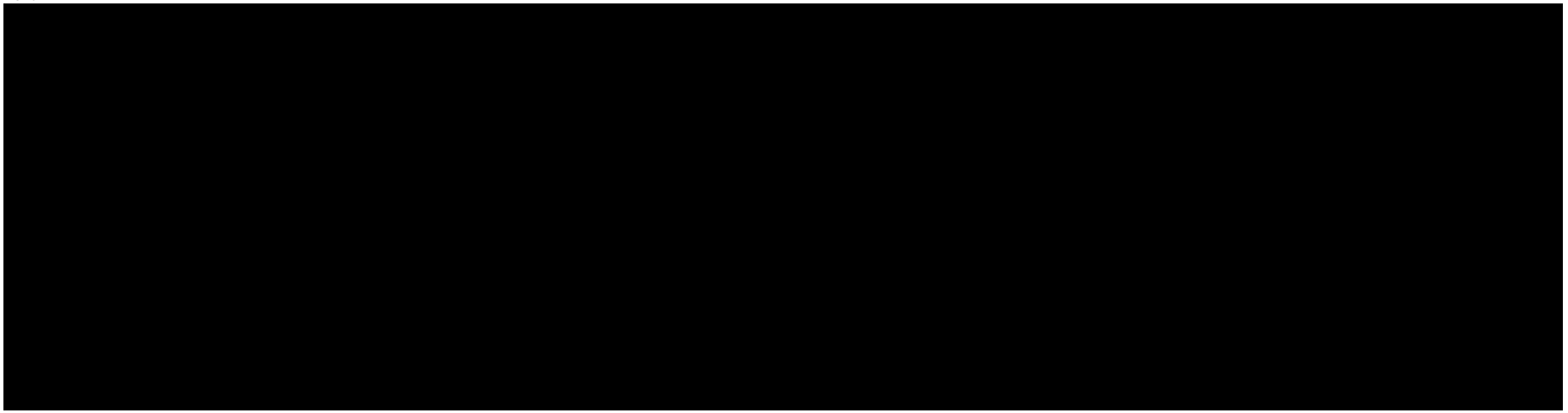
Table 8
SSBO - Investing - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Emissions Estimate						Total Emissions Estimate	
									Investing #1		Investing #2		Investing #3			
									Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum of Controlled or Uncontrolled Daily (lb/day)	Annual (lb/yr)
Hydrochloric acid	7647-01-0	Yes	292						--	--	--	--	--	--	0 14	50 0
Isopropyl alcohol	67-63-0	No	302						--	--	--	--	--	--	108	1 526
Propylene glycol monomethyl ether	107-98-2	No	273						--	--	--	--	--	--	928	13 155
Diethylene glycol	111-46-6	No	258						--	--	--	--	--	--	0 044	0 62
Aluminum	7429-90-5	No	13	..					0 043 (4)	15 7 (4)	3 8E-03 (5)	1 37 (5)	3 7E-08 (5)	1 4E-05 (5)	0 047	17 1
Arsenic	7440-38-2	Yes	37	..	--	--	--	--	-- (4)	-- (4)	-- (5)	-- (5)	-- (5)	-- (5)	--	--
Beryllium	7440-41-7	Yes	58	..	--	--	--	--	-- (4)	-- (4)	-- (5)	-- (5)	-- (5)	-- (5)	--	--
Cadmium	7440-43-9	Yes	83	..	--	--	--	--	-- (4)	-- (4)	-- (5)	-- (5)	-- (5)	-- (5)	--	--
Chromium	7440-47-3	Yes	--	..	--	--	--	--	4 3E-05 (4)	0 016 (4)	3 8E-06 (5)	1 4E-03 (5)	3 7E-11 (5)	1 4E-08 (5)	4 7E-05	0 017
Chromium VI	18540-29-9	Yes	136	..	--	--	--	--	6 1E-08 (4)	2 2E-05 (4)	5 3E-09 (5)	1 9E-06 (5)	5 3E-14 (5)	1 9E-11 (5)	6 6E-08	2 4E-05
Cobalt	7440-48-4	Yes	146	..	--	--	--	--	2 5E-05 (4)	9 2E-03 (4)	2 2E-06 (5)	8 0E-04 (5)	2 2E-11 (5)	8 0E-09 (5)	2 7E-05	9 9E-03
Copper	7440-50-8	No	149	..	--	--	--	--	8 2E-06 (4)	3 0E-03 (4)	7 2E-07 (5)	2 6E-04 (5)	7 2E-12 (5)	2 6E-09 (5)	9 0E-06	3 3E-03
Lead	7439-92-1	Yes	305	..	--	--	--	--	1 7E-06 (4)	6 3E-04 (4)	1 5E-07 (5)	5 5E-05 (5)	1 5E-12 (5)	5 5E-10 (5)	1 9E-06	6 8E-04
Manganese	7439-96-5	Yes	312	..	--	--	--	--	7 5E-06 (4)	2 7E-03 (4)	6 6E-07 (5)	2 4E-04 (5)	6 6E-12 (5)	2 4E-09 (5)	8 2E-06	3 0E-03
Mercury	7439-97-6	Yes	316	..	--	--	--	--	-- (4)	-- (4)	-- (5)	-- (5)	-- (5)	-- (5)	--	--
Nickel	7440-02-0	Yes	364	..	--	--	--	--	2 7E-05 (4)	9 7E-03 (4)	2 3E-06 (5)	8 4E-04 (5)	2 3E-11 (5)	8 4E-09 (5)	2 9E-05	0 011
Selenium	7782-49-2	Yes	575	..	--	--	--	--	-- (4)	-- (4)	-- (5)	-- (5)	-- (5)	-- (5)	--	--
Vanadium	7440-62-2	No	620	..	--	--	--	--	4 3E-05 (4)	0 016 (4)	3 8E-06 (5)	1 4E-03 (5)	3 7E-11 (5)	1 4E-08 (5)	4 7E-05	0 017
Zinc	7440-66-6	No	632	..	--	--	--	--	1 5E-05 (4)	5 5E-03 (4)	1 3E-06 (5)	4 8E-04 (5)	1 3E-11 (5)	4 8E-09 (5)	1 6E-05	6 0E-03

All notes and references are provided on the following page.

Table 8 (continued)
SSBO - Investing - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

NOTES



REFERENCES

(1) Assumption based on previous permitting.
(2) See Table D4 Master Throughput and Production Rates.
(3) Information from product SDS. SDS is confidential business information.
(4) See Table 5 SSBO - Investing #1 - PTE TAC Emissions Estimates for details on investing baghouse emission estimates. Emissions from baghouse 2046 are routed to the thermal oxidizer.
(5) See Table 6 SSBO - Investing #2 - PTE TAC Emissions Estimates for details on investing baghouse emission estimates. Emissions from baghouse 4448 are routed to the thermal oxidizer.
(6) See Table 7 SSBO - Investing #3 (ULPA) - PTE TAC Emssions Estimates for details on investing baghouse emission estimates. Emissions from baghouse 10482 are routed to the thermal oxidizer.

Table 9
SSBO - Burnout Ovens, Wax Components (No Thermal Oxidation) - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton metal poured)	Total Emissions Estimate	
					Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Benzene	71-43-2	Yes	46	[redacted]	0.17	63.7
Methanol	67-56-1	Yes	321		1.36	496
Naphthalene	91-20-3	Yes	428		0.037	13.4
Phenol	108-95-2	Yes	497		0.073	26.8
m-Xylene	108-38-3	Yes	629		0.046	16.7
Toluene	108-88-3	Yes	600		0.13	45.9

NOTES:

[redacted]

REFERENCES:

(1) Based on results of burnout oven emissions testing.

(2) See Table D4, Master Throughput and Production Rates.

Table 10
SSBO - Burnout Ovens, Non-Wax Components (Thermal Oxidation) - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton non-wax component)	Total Emissions Estimate	
					Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Acetaldehyde	75-07-0	Yes	1	[redacted]	3.6E-03	1 31
Ethyl chloride	75-00-3	Yes	230		4.4E-05	0.016
Benzene	71-43-2	Yes	46		0 045	16.3
Naphthalene	91-20-3	Yes	428		4.3E-03	1 57
Phenol	108-95-2	Yes	497		2.9E-04	0.11
1 3-Butadiene	106-99-0	Yes	75		6.4E-03	2 35
Styrene	100-42-5	Yes	585		3.9E-03	1.42
Toluene	108-88-3	Yes	600		9.7E-03	3 53

NOTES:

[redacted]

REFERENCES:

(1) Based on engineering estimate.

(2) See Table D4 Master Throughput and Production Rates.

Table 11
SSBO - Finishing, Inspection - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton PM generated)		Total Emissions Estimate	
				Daily	Annual	Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	15.4	15.4	8.4E-05	0.031
Arsenic	7440-38-2	Yes	37	0.016	0.016	8.9E-08	3.2E-05
Barium	7440-39-3	No	45	0.050	0.050	2.7E-07	1.0E-04
Beryllium	7440-41-7	Yes	58	ND	ND	--	--
Cadmium	7440-43-9	Yes	83	ND	ND	--	--
Chromium	7440-47-3	Yes	--	222	222	1.2E-03	0.44
Chromium VI	18540-29-9	Yes	136	1.0E-03	1.0E-03	5.5E-09	2.0E-06
Cobalt	7440-48-4	Yes	146	58.2	58.2	3.2E-04	0.12
Copper	7440-50-8	No	149	3.40	3.40	1.9E-05	6.8E-03
Lead	7439-92-1	Yes	305	5.4E-03	5.4E-03	3.0E-08	1.1E-05
Manganese	7439-96-5	Yes	312	2.20	2.20	1.2E-05	4.4E-03
Mercury	7439-97-6	Yes	316	ND	ND	--	--
Nickel	7440-02-0	Yes	364	568	568	3.1E-03	1.14
Selenium	7782-49-2	Yes	575	ND	ND	--	--
Silver	7440-22-4	No	580	ND	ND	--	--
Vanadium	7440-62-2	No	620	0.14	0.14	7.8E-07	2.8E-04
Zinc	7440-66-6	No	632	0.20	0.20	1.1E-06	4.0E-04

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (maximum daily PM generated [lb/day]) x (emission factor [lb/ton PM generated]) x (ton/2,000 lb) x (1 - [baghouse control efficiency {%}]/100)

Maximum daily PM generated (lb PM generated/day) = 11.0 (1)

Baghouse 8195 control efficiency (%) = 99.9 (2)

(b) Annual emissions estimate (lb/yr) = (annual PM generated [ton/yr]) x (emission factor [lb/ton PM generated]) x (1 - [baghouse control efficiency {%}]/100)

Annual PM generated (tons PM generated/yr) = 2.00 (1)

Baghouse 8195 control efficiency (%) = 99.9 (2)

REFERENCES:

(1) See Table D3, Source Group Emission Factors.

(2) See Table D4, Master Throughput and Production Rates.

Table 12
SSBO - Finishing, Rework Grinding (HEPA) - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton PM generated)		Total Emissions Estimate	
				Daily	Annual	Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	12.8	12.8	6.9E-07	2.5E-04
Arsenic	7440-38-2	Yes	37	0.016	0.016	8.6E-10	3.1E-07
Barium	7440-39-3	No	45	ND	ND	--	--
Beryllium	7440-41-7	Yes	58	ND	ND	--	--
Cadmium	7440-43-9	Yes	83	ND	ND	--	--
Chromium	7440-47-3	Yes	--	302	302	1.6E-05	6.0E-03
Chromium VI	18540-29-9	Yes	136	1.6E-03	1.6E-03	8.6E-11	3.1E-08
Cobalt	7440-48-4	Yes	146	71.8	71.8	3.9E-06	1.4E-03
Copper	7440-50-8	No	149	2.20	2.20	1.2E-07	4.3E-05
Lead	7439-92-1	Yes	305	ND	ND	--	--
Manganese	7439-96-5	Yes	312	1.60	1.60	8.7E-08	3.2E-05
Mercury	7439-97-6	Yes	316	ND	ND	--	--
Nickel	7440-02-0	Yes	364	820	820	4.4E-05	0.016
Selenium	7782-49-2	Yes	575	ND	ND	--	--
Silver	7440-22-4	No	580	ND	ND	--	--
Vanadium	7440-62-2	No	620	0.14	0.14	7.8E-09	2.8E-06
Zinc	7440-66-6	No	632	0.092	0.092	5.0E-09	1.8E-06

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (maximum daily PM generated [lb/day]) x (emission factor [lb/ton PM generated]) x (ton/2,000 lb) x (1 - [baghouse control efficiency {%}]/100)

Maximum daily PM generated (lb PM generated/day) = 361 (1)

Baghouse 9338 control efficiency (%) = 99.99997 (2)

(b) Annual emissions estimate (lb/yr) = (annual PM generated [ton/yr]) x (emission factor [lb/ton PM generated]) x (1 - [baghouse control efficiency {%}]/100)

Annual PM generated (tons PM generated/yr) = 65.9 (1)

Baghouse 9338 control efficiency (%) = 99.99997 (2)

REFERENCES:

(1) See Table D3, Source Group Emission Factors.

(2) See Table D4, Master Throughput and Production Rates.

Table 13
SSBO - Ingot Cutting (ULPA) - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton PM generated)		Total Emissions Estimate	
				Daily	Annual	Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	12.0	12.0	1.8E-08	6.7E-06
Arsenic	7440-38-2	Yes	37	0.034	0.034	5.2E-11	1.9E-08
Barium	7440-39-3	No	45	ND	ND	--	--
Beryllium	7440-41-7	Yes	58	ND	ND	--	--
Cadmium	7440-43-9	Yes	83	ND	ND	--	--
Chromium	7440-47-3	Yes	--	364	364	5.6E-07	2.0E-04
Chromium VI	18540-29-9	Yes	136	2.8E-03	2.8E-03	4.3E-12	1.6E-09
Cobalt	7440-48-4	Yes	146	236	236	3.6E-07	1.3E-04
Copper	7440-50-8	No	149	0.80	0.80	1.2E-09	4.5E-07
Lead	7439-92-1	Yes	305	ND	ND	--	--
Manganese	7439-96-5	Yes	312	2.00	2.00	3.1E-09	1.1E-06
Mercury	7439-97-6	Yes	316	ND	ND	--	--
Nickel	7440-02-0	Yes	364	844	844	1.3E-06	4.7E-04
Selenium	7782-49-2	Yes	575	ND	ND	--	--
Silver	7440-22-4	No	580	ND	ND	--	--
Vanadium	7440-62-2	No	620	0.14	0.14	2.2E-10	8.0E-08
Zinc	7440-66-6	No	632	0.064	0.064	9.8E-11	3.6E-08

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (maximum daily PM generated [lb/day]) x (emission factor [lb/ton PM generated]) x (ton/2,000 lb) x (1 - [baghouse control efficiency {%}]/100)

Maximum daily PM generated (lb PM generated/day) = 307 (1)

Baghouse 10193 control efficiency (%) = 99.999999 (2)

(b) Annual emissions estimate (lb/yr) = (annual PM generated [ton/yr]) x (emission factor [lb/ton PM generated]) x (1 - [baghouse control efficiency {%}]/100)

Annual PM generated (tons PM generated/yr) = 56.1 (1)

Baghouse 10193 control efficiency (%) = 99.999999 (2)

REFERENCES:

(1) See Table D3, Source Group Emission Factors.

(2) See Table D4, Master Throughput and Production Rates.

Table 14
SSBO - Finishing, Sandblast (ULPA) - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton PM generated)		Total Emissions Estimate	
				Daily	Annual	Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	36.0	36.0	5.6E-08	2.0E-05
Arsenic	7440-38-2	Yes	37	ND	ND	--	--
Barium	7440-39-3	No	45	0.20	0.20	3.1E-10	1.1E-07
Beryllium	7440-41-7	Yes	58	ND	ND	--	--
Cadmium	7440-43-9	Yes	83	ND	ND	--	--
Chromium	7440-47-3	Yes	--	29.2	29.2	4.5E-08	1.7E-05
Chromium VI	18540-29-9	Yes	136	2.0E-04	2.0E-04	3.1E-13	1.1E-10
Cobalt	7440-48-4	Yes	146	7.20	7.20	1.1E-08	4.1E-06
Copper	7440-50-8	No	149	0.18	0.18	2.8E-10	1.0E-07
Lead	7439-92-1	Yes	305	ND	ND	--	--
Manganese	7439-96-5	Yes	312	0.80	0.80	1.2E-09	4.5E-07
Mercury	7439-97-6	Yes	316	ND	ND	--	--
Nickel	7440-02-0	Yes	364	75.8	75.8	1.2E-07	4.3E-05
Selenium	7782-49-2	Yes	575	ND	ND	--	--
Silver	7440-22-4	No	580	0.022	0.022	3.4E-11	1.2E-08
Vanadium	7440-62-2	No	620	0.056	0.056	8.7E-11	3.2E-08
Zinc	7440-66-6	No	632	0.40	0.40	6.2E-10	2.3E-07

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (maximum daily PM generated [lb/day]) x (emission factor [lb/ton PM generated]) x (ton/2,000 lb) x (1 - [baghouse control efficiency {%}]/100)

Maximum daily PM generated (lb PM generated/day) = 311 (1)

Baghouse 10194 control efficiency (%) = 99.999999 (2)

(b) Annual emissions estimate (lb/yr) = (annual PM generated [ton/yr]) x (emission factor [lb/ton PM generated]) x (1 - [baghouse control efficiency {%}]/100)

Annual PM generated (tons PM generated/yr) = 56.7 (1)

Baghouse 10194 control efficiency (%) = 99.999999 (2)

REFERENCES:

(1) See Table D3, Source Group Emission Factors.

(2) See Table D4, Master Throughput and Production Rates.

Table 15
SSBO - Cleaning, Cutting (ULPA) - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton PM generated)		Total Emissions Estimate	
				Daily	Annual	Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	14.2	14.2	9.8E-08	3.6E-05
Arsenic	7440-38-2	Yes	37	0.030	0.030	2.1E-10	7.6E-08
Barium	7440-39-3	No	45	0.092	0.092	6.4E-10	2.3E-07
Beryllium	7440-41-7	Yes	58	ND	ND	--	--
Cadmium	7440-43-9	Yes	83	ND	ND	--	--
Chromium	7440-47-3	Yes	--	312	312	2.2E-06	7.9E-04
Chromium VI	18540-29-9	Yes	136	0.020	0.020	1.4E-10	5.0E-08
Cobalt	7440-48-4	Yes	146	90.2	90.2	6.2E-07	2.3E-04
Copper	7440-50-8	No	149	0.60	0.60	4.1E-09	1.5E-06
Lead	7439-92-1	Yes	305	ND	ND	--	--
Manganese	7439-96-5	Yes	312	1.80	1.80	1.2E-08	4.5E-06
Mercury	7439-97-6	Yes	316	ND	ND	--	--
Nickel	7440-02-0	Yes	364	850	850	5.9E-06	2.1E-03
Selenium	7782-49-2	Yes	575	ND	ND	--	--
Silver	7440-22-4	No	580	0.050	0.050	3.5E-10	1.3E-07
Vanadium	7440-62-2	No	620	0.14	0.14	9.5E-10	3.5E-07
Zinc	7440-66-6	No	632	0.058	0.058	4.0E-10	1.5E-07

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (maximum daily PM generated [lb/day]) x (emission factor [lb/ton PM generated]) x (ton/2,000 lb) x (1 - [baghouse control efficiency {%}]/100)

Maximum daily PM generated (lb PM generated/day) = 1,381 (1)

Baghouse 10498 control efficiency (%) = 99.999999 (2)

(b) Annual emissions estimate (lb/yr) = (annual PM generated [ton/yr]) x (emission factor [lb/ton PM generated]) x (1 - [baghouse control efficiency {%}]/100)

Annual PM generated (tons PM generated/yr) = 252 (1)

Baghouse 10498 control efficiency (%) = 99.999999 (2)

REFERENCES:

(1) See Table D3, Source Group Emission Factors.

(2) See Table D4, Master Throughput and Production Rates.

Table 16
SSBO - Cleaning, Burnoff (ULPA) - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton PM generated)		Total Emissions Estimate	
				Daily	Annual	Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	4.60	4.60	2.4E-09	8.6E-07
Arsenic	7440-38-2	Yes	37	0.013	0.013	6.5E-12	2.4E-09
Barium	7440-39-3	No	45	ND	ND	--	--
Beryllium	7440-41-7	Yes	58	ND	ND	--	--
Cadmium	7440-43-9	Yes	83	ND	ND	--	--
Chromium	7440-47-3	Yes	--	46.0	46.0	2.4E-08	8.6E-06
Chromium VI	18540-29-9	Yes	136	1.80	1.80	9.2E-10	3.4E-07
Cobalt	7440-48-4	Yes	146	51.2	51.2	2.6E-08	9.6E-06
Copper	7440-50-8	No	149	5.40	5.40	2.8E-09	1.0E-06
Lead	7439-92-1	Yes	305	5.8E-03	5.8E-03	3.0E-12	1.1E-09
Manganese	7439-96-5	Yes	312	1.60	1.60	8.2E-10	3.0E-07
Mercury	7439-97-6	Yes	316	ND	ND	--	--
Nickel	7440-02-0	Yes	364	324	324	1.7E-07	6.1E-05
Selenium	7782-49-2	Yes	575	ND	ND	--	--
Silver	7440-22-4	No	580	ND	ND	--	--
Vanadium	7440-62-2	No	620	0.068	0.068	3.5E-11	1.3E-08
Zinc	7440-66-6	No	632	0.20	0.20	1.0E-10	3.7E-08

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (maximum daily PM generated [lb/day]) x (emission factor [lb/ton PM generated]) x (ton/2,000 lb) x (1 - [baghouse control efficiency {%}]/100)

Maximum daily PM generated (lb PM generated/day) = 102 (1)

Baghouse 10499 control efficiency (%) = 99.999999 (2)

(b) Annual emissions estimate (lb/yr) = (annual PM generated [ton/yr]) x (emission factor [lb/ton PM generated]) x (1 - [baghouse control efficiency {%}]/100)

Annual PM generated (tons PM generated/yr) = 18.7 (1)

Baghouse 10499 control efficiency (%) = 99.999999 (2)

REFERENCES:

(1) See Table D3, Source Group Emission Factors.

(2) See Table D4, Master Throughput and Production Rates.

Table 17
SSBO - Cleaning, Shell Removal (ULPA) - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton PM generated)		Total Emissions Estimate	
				Daily	Annual	Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	52.4	52.4	7.1E-07	2.6E-04
Arsenic	7440-38-2	Yes	37	0.019	0.019	2.6E-10	9.5E-08
Barium	7440-39-3	No	45	ND	ND	--	--
Beryllium	7440-41-7	Yes	58	ND	ND	--	--
Cadmium	7440-43-9	Yes	83	ND	ND	--	--
Chromium	7440-47-3	Yes	--	2.20	2.20	3.0E-08	1.1E-05
Chromium VI	18540-29-9	Yes	136	ND	ND	--	--
Cobalt	7440-48-4	Yes	146	0.80	0.80	1.1E-08	4.0E-06
Copper	7440-50-8	No	149	0.80	0.80	1.1E-08	4.0E-06
Lead	7439-92-1	Yes	305	0.15	0.15	2.0E-09	7.3E-07
Manganese	7439-96-5	Yes	312	3.20	3.20	4.3E-08	1.6E-05
Mercury	7439-97-6	Yes	316	ND	ND	--	--
Nickel	7440-02-0	Yes	364	3.60	3.60	4.9E-08	1.8E-05
Selenium	7782-49-2	Yes	575	ND	ND	--	--
Silver	7440-22-4	No	580	0.034	0.034	4.6E-10	1.7E-07
Vanadium	7440-62-2	No	620	0.12	0.12	1.6E-09	5.8E-07
Zinc	7440-66-6	No	632	0.16	0.16	2.1E-09	7.7E-07

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (maximum daily PM generated [lb/day]) x (emission factor [lb/ton PM generated]) x (ton/2,000 lb) x (1 - [baghouse control efficiency {%}]/100)

Maximum daily PM generated (lb PM generated/day) = 2,712 (1)

Baghouse CLEAN control efficiency (%) = 99.999999 (2)

(b) Annual emissions estimate (lb/yr) = (annual PM generated [ton/yr]) x (emission factor [lb/ton PM generated]) x (1 - [baghouse control efficiency {%}]/100)

Annual PM generated (tons PM generated/yr) = 495 (1)

Baghouse CLEAN control efficiency (%) = 99.999999 (2)

REFERENCES:

(1) See Table D3, Source Group Emission Factors.

(2) See Table D4, Master Throughput and Production Rates.

Table 18
SSBO - Commingled Building - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	SSBO Baghouse Total Emissions Estimate [1]		Total Fugitive Emissions Estimate	
				Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	8.6E-05	0.031	8.6E-07	3.1E-04
Arsenic	7440-38-2	Yes	37	9.0E-08	3.3E-05	9.0E-10	3.3E-07
Bariuim	7440-39-3	No	45	2.8E-07	1.0E-04	2.8E-09	1.0E-06
Beryllium	7440-41-7	Yes	58	0	0	--	--
Cadmium	7440-43-9	Yes	83	0	0	--	--
Chromium	7440-47-3	Yes	--	1.2E-03	0.45	1.2E-05	4.5E-03
Chromium VI	18540-29-9	Yes	136	6.6E-09	2.4E-06	6.6E-11	2.4E-08
Cobalt	7440-48-4	Yes	146	3.2E-04	0.12	3.2E-06	1.2E-03
Copper	7440-50-8	No	149	1.9E-05	6.9E-03	1.9E-07	6.9E-05
Lead	7439-92-1	Yes	305	3.2E-08	1.2E-05	3.2E-10	1.2E-07
Manganese	7439-96-5	Yes	312	1.2E-05	4.5E-03	1.2E-07	4.5E-05
Mercury	7439-97-6	Yes	316	0	0	--	--
Nickel	7440-02-0	Yes	364	3.2E-03	1.16	3.2E-05	0.012
Selenium	7782-49-2	Yes	575	0	0	--	--
Silver	7440-22-4	No	580	8.4E-10	3.1E-07	8.4E-12	3.1E-09
Vanadium	7440-62-2	No	620	7.9E-07	2.9E-04	7.9E-09	2.9E-06
Zinc	7440-66-6	No	632	1.1E-06	4.0E-04	1.1E-08	4.0E-06

NOTES:

(a) Maximum daily emissions estimate (lb/day) = (maximum daily baghouse total emission estimate [lb/day]) x (0.01); see Reference

(b) Annual emissions estimate (lb/yr) = (annual baghouse total emission estimate [lb/yr]) x (0.01); see Reference (2).

REFERENCES:

(1) Sum of the individual baghouse estimated emissions.

(2) Based on the assumption that fugitive emissions are equivalent to 1 percent of estimated pollutant emissions from baghouses.

Table 19
SSBO - Heat Treat, Vacuum Furnace - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS/ODEQ ID	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton metal processed)	Total Emissions Estimate	
					Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	1.8E-03	9.9E-03	3.63
Antimony	7440-36-0	Yes	33	2.9E-05	1.6E-04	0.058
Arsenic	7440-38-2	Yes	37	ND	--	--
Barium	7440-39-3	No	45	0	--	--
Beryllium	7440-41-7	Yes	58	ND	--	--
Cadmium	7440-43-9	Yes	83	8.5E-06	4.6E-05	0.017
Chromium	7440-47-3	Yes	--	2.7E-04	1.5E-03	0.54
Cobalt	7440-48-4	Yes	146	0	--	--
Copper	7440-50-8	No	149	9.0E-05	4.9E-04	0.18
Lead	7439-92-1	Yes	305	1.2E-04	6.5E-04	0.24
Manganese	7439-96-5	Yes	312	3.0E-05	1.6E-04	0.060
Mercury	7439-97-6	Yes	316	0	--	--
Nickel	7440-02-0	Yes	364	3.8E-05	2.0E-04	0.075
Phosphorus	504	Yes	504	0	--	--
Selenium	7782-49-2	Yes	575	ND	--	--
Silver	7440-22-4	No	580	ND	--	--
Thallium	7440-28-0	No	595	ND	--	--
Vanadium	7440-62-2	No	620	ND	--	--
Zinc	7440-66-6	No	632	0	--	--

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (emission factor [lb/ton metal processed]) x (maximum daily metal processed [lb/day]) x (ton/2,000 lb)

Maximum daily metal processed in vacuum/electric furnace (lb/day) = 10,849 (2)

(b) Annual emissions estimate (lb/yr) = (emission factor [lb/ton metal processed]) x (annual metal processed [ton/yr])

Annual metal processed in vacuum/electric furnace (ton/yr) = 1,980 (2)

REFERENCES:

(1) Emission factor based on heat treat oven stack test for similar facility. Emission factors listed as zero values represent toxic air contaminants that are not assumed to originate from the the heat treat stack.

(2) See Table D4, Master Throughput and Production Rates.

Table 20
SSBO - Heat Treat, Natural Gas Furnace - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS/ODEQ ID	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton metal processed)	Total Emissions Estimate	
					Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	1.8E-03	5.9E-03	2.14
Antimony	7440-36-0	Yes	33	2.9E-05	9.3E-05	0.034
Arsenic	7440-38-2	Yes	37	ND	--	--
Barium	7440-39-3	No	45	0	--	--
Beryllium	7440-41-7	Yes	58	ND	--	--
Cadmium	7440-43-9	Yes	83	8.5E-06	2.7E-05	9.9E-03
Chromium	7440-47-3	Yes	--	2.7E-04	8.8E-04	0.32
Chromium VI	18540-29-9	Yes	136	1.6E-08	5.1E-08	1.8E-05
Cobalt	7440-48-4	Yes	146	0	--	--
Copper	7440-50-8	No	149	9.0E-05	2.9E-04	0.10
Lead	7439-92-1	Yes	305	1.2E-04	3.8E-04	0.14
Manganese	7439-96-5	Yes	312	3.0E-05	9.7E-05	0.035
Mercury	7439-97-6	Yes	316	0	--	--
Nickel	7440-02-0	Yes	364	3.8E-05	1.2E-04	0.044
Phosphorus	504	Yes	504	0	--	--
Selenium	7782-49-2	Yes	575	ND	--	--
Silver	7440-22-4	No	580	ND	--	--
Thallium	7440-28-0	No	595	ND	--	--
Vanadium	7440-62-2	No	620	ND	--	--
Zinc	7440-66-6	No	632	0	--	--

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (emission factor [lb/ton metal processed]) x (maximum daily metal processed [lb/day]) x (ton/2,000 lb)

Maximum daily metal processed in natural gas furnace (lb/day) = 6,411 (2)

(b) Annual emissions estimate (lb/yr) = (emission factor [lb/ton metal processed]) x (annual metal processed [ton/yr])

Annual metal processed in natural gas furnace (ton/yr) = 1,170 (2)

REFERENCES:

(1) Emission factor based on heat treat oven stack test for similar facility. Emission factors listed as zero values represent toxic air contaminants that are not assumed to originate from the the heat treat stack.

(2) See Table D4, Master Throughput and Production Rates.

Table 21
SSBO - Production Welding - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant [1]	CAS/ODEQ ID	HAP? (Yes/No)	ODEQ Sequence Number	[redacted]	Total Emissions Estimate	
					Maximum Daily (lb/day)	Annual (lb/yr)
Aluminum	7429-90-5	No	13		3.3E-03 [a]	1.22 [b]
Chromium	7440-47-3	Yes	--		0.016 [a]	5.67 [b]
Chromium VI	18540-29-9	Yes	136		7.8E-04 [c]	0.28 [d]
Cobalt	7440-48-4	Yes	146		0.033 [a]	12.2 [b]
Copper	7440-50-8	No	149		1.9E-03 [a]	0.70 [b]
Lead	7439-92-1	Yes	305		5.4E-07 [a]	2.0E-04 [b]
Manganese	7439-96-5	Yes	312		4.1E-03 [a]	1.49 [b]
Nickel	7440-02-0	Yes	364		0.051 [a]	18.5 [b]
Phosphorus	504	Yes	504		1.6E-05 [a]	6.0E-03 [b]
Selenium	7782-49-2	Yes	575		8.2E-08 [a]	3.0E-05 [b]
Silver	7440-22-4	No	580		5.4E-04 [a]	0.20 [b]
Vanadium	7440-62-2	No	620		2.2E-03 [a]	0.80 [b]

NOTES:

[redacted]

REFERENCES:

(1) Information based on review of safety data sheets. Value represents maximum percentage in all wires used at SSBO. SDS's are confidential business information.

(2) See Table D4, Master Throughput and Production Rates. Excludes portion of welding that is controlled by baghouse.

(3) San Diego County Air Pollution Control District, Welding Operations, dated October 16, 1998. Based on American Welding Society information and the National Steel and Shipbuilding Company (NASSCO) research. Assumes tungsten inert gas (TIG) welding fume generation rate.

(4) San Diego County Air Pollution Control District, Welding Operations, dated October 16, 1998. Based on American Welding Society information and the National Steel and Shipbuilding Company (NASSCO) research.

(5) San Diego County Air Pollution Control District, Welding Operations, dated October 16, 1998. Based on American Welding Society information and the National Steel and Shipbuilding Company (NASSCO) research. Hexavalent chromium accounts for 5 percent of total chromium emissions for TIG welding.

Table 22
SSBO - Wax Fugitives - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Product	Toxic Air Contaminant [1]	CAS	HAP? (Yes/No)	ODEQ Sequence Number	[redacted]	Total Emissions Estimate	
						Maximum Daily [b] (lb/day)	Annual [c] (lb/yr)
Wax Mold Release Agent	1,1-Difluoroethane	75-37-6	No	244		8.03	2,930
Acetone	Acetone	67-64-1	No	634		17.1	6,239
Dye	Butanol	71-36-3	No	78		1.8E-03	0.64
	Isopropyl alcohol	67-63-0	No	302		5.3E-04	0.19
	Triphenyl phosphate	115-86-6	No	516		3.5E-04	0.13

NOTES:

[redacted]

REFERENCES:

(1) Information from product SDS. SDS is confidential business information.

(2) Density of water at 32 degrees Fahrenheit.

(3) See Table D4, Master Throughput and Production Rates.

Table 23
SSBO - SLA - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Product	Toxic Air Contaminant [1]	CAS	HAP? (Yes/No)	ODEQ Sequence Number	[redacted]	Total Emissions Estimate	
						Maximum Daily [b] (lb/day)	Annual [c] (lb/yr)
Paint/Coating	Acetone	67-64-1	No	634		1.94	709
	1-Methoxy-2-propyl acetate	108-65-6	No	274		0.47	170
	Xylenes (mixed isomers)	1330-20-7	Yes	628		0.12	42.5
	Ethyl benzene	100-41-4	Yes	229		0.026	9.45

NOTES:

[redacted]

REFERENCES:

(1) Information from product SDS. SDS is confidential business information.

(2) Density of water at 32 degrees Fahrenheit.

(3) See Table D4, Master Throughput and Production Rates.

Table 24
SSBO - PTE TAC Emissions Summary
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS/ODEQ ID	TAC? (Yes/No)	HAP? (Yes/No)	ODEQ Sequence Number	Emissions Estimates													
					Casting						Autoclave		Investing		Burnout Ovens			
					Air Casting Parts		Vacuum Casting Parts		Molten Metal Insulation						Burnout Ovens - Wax		Burnout Ovens - Non-Wax Flashfire	
					Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)
Organic Compounds																		
Acetaldehyde	75-07-0	Yes	Yes	1	--	--	--	--	--	--	--	--	--	--	--	--	3 6E-03	1.31
Acetone	67-64-1	Yes	No	634	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	Yes	Yes	46	--	--	--	--	--	--	0.074	27 0	--	--	0.17	63.7	0.045	16.3
1 3-Butadiene	106-99-0	Yes	Yes	75	--	--	--	--	--	--	--	--	--	--	--	--	6.4E-03	2.35
Butanol	71-36-3	Yes	No	78	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethyl benzene	100-41-4	Yes	Yes	229	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethyl chloride	75-00-3	Yes	Yes	230	--	--	--	--	--	--	--	--	--	--	--	--	4.4E-05	0.016
1 1-Difluoroethane	75-37-6	Yes	No	244	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylene glycol	111-46-6	Yes	No	258	--	--	--	--	--	--	--	--	0.044	0.62	--	--	--	--
Propylene glycol monomethyl ether	107-98-2	Yes	No	273	--	--	--	--	--	--	--	--	928	13 155	--	--	--	--
1-Methoxy-2-propyl acetate	108-65-6	Yes	No	274	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl alcohol	67-63-0	Yes	No	302	--	--	--	--	--	--	--	--	108	1 526	--	--	--	--
Methanol	67-56-1	Yes	Yes	321	--	--	--	--	--	--	--	--	--	--	1 36	496	--	--
Methyl methacrylate	80-62-6	Yes	Yes	339	--	--	--	--	--	--	0.52	189	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	Yes	428	--	--	--	--	--	--	--	--	--	--	0.037	13.4	4 3E-03	1.57
Phenol	108-95-2	Yes	Yes	497	--	--	--	--	--	--	--	--	--	--	0.073	26.8	2.9E-04	0.11
Triphenyl phosphate	115-86-6	Yes	No	516	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	100-42-5	Yes	Yes	585	--	--	--	--	--	--	0.025	9 00	--	--	--	--	3.9E-03	1.42
Toluene	108-88-3	Yes	Yes	600	--	--	--	--	--	--	0.12	45 0	--	--	0.13	45.9	9 7E-03	3.53
Xylenes (mixed isomers)	1330-20-7	Yes	Yes	628	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m-Xylene	108-38-3	Yes	Yes	629	--	--	--	--	--	--	--	--	--	--	0.046	16.7	--	--
Inorganic Compounds																		
Hydrochloric acid	7647-01-0	Yes	Yes	292	--	--	--	--	--	--	--	--	0.14	50 0	--	--	--	--
Metals																		
Aluminum	7429-90-5	Yes	No	13	0.43	118	5.9E-11	7 0E-09	0.92	336	--	--	0.047	17.1	--	--	--	--
Antimony	7440-36-0	Yes	Yes	33	--	--	1.9E-15	2 2E-14	--	--	--	--	--	--	--	--	--	--
Arsenic	7440-38-2	Yes	Yes	37	3.9E-05	0.011	3.7E-13	4.4E-12	--	--	--	--	--	--	--	--	--	--
Barium	7440-39-3	Yes	No	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	7440-43-9	Yes	Yes	83	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	7440-47-3	No	Yes	--	0 024	7.45	1.9E-11	1 8E-09	--	--	--	--	4 7E-05	0 017	--	--	--	--
Chromium VI	18540-29-9	Yes	Yes	136	1.0E-06	8 7E-05	3.7E-14	3.4E-12	--	--	--	--	6 6E-08	2.4E-05	--	--	--	--
Cobalt	7440-48-4	Yes	Yes	146	1.1E-03	0.33	6.9E-10	5 0E-08	--	--	--	--	2 7E-05	9.9E-03	--	--	--	--
Copper	7440-50-8	Yes	No	149	0 022	8.07	1.9E-11	2 5E-10	--	--	--	--	9 0E-06	3.3E-03	--	--	--	--
Lead	7439-92-1	Yes	Yes	305	2.2E-04	0.062	9.4E-14	1 7E-12	--	--	--	--	1.9E-06	6.8E-04	--	--	--	--
Manganese	7439-96-5	Yes	Yes	312	0 029	8.07	5.8E-10	4 3E-09	--	--	--	--	8 2E-06	3.0E-03	--	--	--	--
Mercury	7439-97-6	Yes	Yes	316	--	--	2.3E-14	3.4E-13	--	--	--	--	--	--	--	--	--	--
Molybdenum trioxide	1313-27-5	Yes	No	361	--	--	2.7E-12	2 2E-10	--	--	--	--	--	--	--	--	--	--
Nickel	7440-02-0	Yes	Yes	364	0 012	3.91	6.8E-10	1 7E-07	--	--	--	--	2.9E-05	0 011	--	--	--	--
Nickel oxide	1313-99-1	Yes	Yes	366	--	--	2.1E-11	5.1E-09	--	--	--	--	--	--	--	--	--	--
Phosphorus	504	Yes	Yes	504	--	--	4.7E-13	2.4E-11	--	--	--	--	--	--	--	--	--	--
Selenium	7782-49-2	Yes	Yes	575	4.3E-05	9.9E-03	2.3E-14	3.4E-13	--	--	--	--	--	--	--	--	--	--
Silver	7440-22-4	Yes	No	580	--	--	4.7E-15	3 2E-13	--	--	--	--	--	--	--	--	--	--
Thallium	7440-28-0	Yes	No	595	--	--	2.3E-15	6 8E-14	--	--	--	--	--	--	--	--	--	--
Vanadium	7440-62-2	Yes	No	620	1.2E-04	0.036	4.7E-13	5 8E-11	--	--	--	--	4 7E-05	0 017	--	--	--	--
Zinc	7440-66-6	Yes	No	632	0 029	7.45	--	--	--	--	--	--	1 6E-05	6.0E-03	--	--	--	--

Table 24
SSBO - PTE TAC Emissions Summary
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS/ODEQ ID	TAC? (Yes/No)	HAP? (Yes/No)	ODEQ Sequence Number	Emissions											
					Ingot Cutting		Cleaning		Finishing		Commingled		Heat Treat			
													Vacuum/Electric		Natural Gas	
					Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)
Organic Compounds																
Acetaldehyde	75-07-0	Yes	Yes	1	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	67-64-1	Yes	No	634	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	Yes	Yes	46	--	--	--	--	--	--	--	--	--	--	--	--
1 3-Butadiene	106-99-0	Yes	Yes	75	--	--	--	--	--	--	--	--	--	--	--	--
Butanol	71-36-3	Yes	No	78	--	--	--	--	--	--	--	--	--	--	--	--
Ethyl benzene	100-41-4	Yes	Yes	229	--	--	--	--	--	--	--	--	--	--	--	--
Ethyl chloride	75-00-3	Yes	Yes	230	--	--	--	--	--	--	--	--	--	--	--	--
1 1-Difluoroethane	75-37-6	Yes	No	244	--	--	--	--	--	--	--	--	--	--	--	--
Diethylene glycol	111-46-6	Yes	No	258	--	--	--	--	--	--	--	--	--	--	--	--
Propylene glycol monomethyl ether	107-98-2	Yes	No	273	--	--	--	--	--	--	--	--	--	--	--	--
1-Methoxy-2-propyl acetate	108-65-6	Yes	No	274	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl alcohol	67-63-0	Yes	No	302	--	--	--	--	--	--	--	--	--	--	--	--
Methanol	67-56-1	Yes	Yes	321	--	--	--	--	--	--	--	--	--	--	--	--
Methyl methacrylate	80-62-6	Yes	Yes	339	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	Yes	428	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	108-95-2	Yes	Yes	497	--	--	--	--	--	--	--	--	--	--	--	--
Triphenyl phosphate	115-86-6	Yes	No	516	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	100-42-5	Yes	Yes	585	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	108-88-3	Yes	Yes	600	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (mixed isomers)	1330-20-7	Yes	Yes	628	--	--	--	--	--	--	--	--	--	--	--	--
m-Xylene	108-38-3	Yes	Yes	629	--	--	--	--	--	--	--	--	--	--	--	--
Inorganic Compounds																
Hydrochloric acid	7647-01-0	Yes	Yes	292	--	--	--	--	--	--	--	--	--	--	--	--
Metals																
Aluminum	7429-90-5	Yes	No	13	1.8E-08	6.7E-06	8.1E-07	3 0E-04	8 5E-05	0.031	8.6E-07	3.1E-04	9.9E-03	3 63	5.9E-03	2.14
Antimony	7440-36-0	Yes	Yes	33	--	--	--	--	--	--	--	--	1 6E-04	0.058	9.3E-05	0 034
Arsenic	7440-38-2	Yes	Yes	37	5.2E-11	1.9E-08	4.7E-10	1 7E-07	9 0E-08	3.3E-05	9.0E-10	3.3E-07	--	--	--	--
Barium	7440-39-3	Yes	No	45	--	--	6.4E-10	2 3E-07	2 7E-07	1.0E-04	2.8E-09	1.0E-06	--	--	--	--
Cadmium	7440-43-9	Yes	Yes	83	--	--	--	--	--	--	--	--	4 6E-05	0.017	2.7E-05	9.9E-03
Chromium	7440-47-3	No	Yes	--	5.6E-07	2.0E-04	2.2E-06	8.1E-04	1 2E-03	0.45	1.2E-05	4.5E-03	1 5E-03	0 54	8.8E-04	0.32
Chromium VI	18540-29-9	Yes	Yes	136	4.3E-12	1.6E-09	1.1E-09	3.9E-07	5 6E-09	2.0E-06	6.6E-11	2.4E-08	--	--	5.1E-08	1.8E-05
Cobalt	7440-48-4	Yes	Yes	146	3.6E-07	1.3E-04	6.6E-07	2.4E-04	3 2E-04	0.12	3.2E-06	1.2E-03	--	--	--	--
Copper	7440-50-8	Yes	No	149	1.2E-09	4.5E-07	1.8E-08	6 5E-06	1.9E-05	6.9E-03	1.9E-07	6.9E-05	4.9E-04	0.18	2.9E-04	0.10
Lead	7439-92-1	Yes	Yes	305	--	--	2.0E-09	7 3E-07	3 0E-08	1.1E-05	3.2E-10	1.2E-07	6 5E-04	0 24	3.8E-04	0.14
Manganese	7439-96-5	Yes	Yes	312	3.1E-09	1.1E-06	5.7E-08	2.1E-05	1 2E-05	4.4E-03	1.2E-07	4.5E-05	1 6E-04	0.060	9.7E-05	0 035
Mercury	7439-97-6	Yes	Yes	316	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum trioxide	1313-27-5	Yes	No	361	--	--	--	--	--	--	--	--	--	--	--	--
Nickel	7440-02-0	Yes	Yes	364	1.3E-06	4.7E-04	6.1E-06	2 2E-03	3 2E-03	1.15	3.2E-05	0 012	2 0E-04	0.075	1.2E-04	0 044
Nickel oxide	1313-99-1	Yes	Yes	366	--	--	--	--	--	--	--	--	--	--	--	--
Phosphorus	504	Yes	Yes	504	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	7782-49-2	Yes	Yes	575	--	--	--	--	--	--	--	--	--	--	--	--
Silver	7440-22-4	Yes	No	580	--	--	8.1E-10	2.9E-07	3.4E-11	1.2E-08	8.4E-12	3.1E-09	--	--	--	--
Thallium	7440-28-0	Yes	No	595	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	7440-62-2	Yes	No	620	2.2E-10	8.0E-08	2.6E-09	9.4E-07	7.9E-07	2.9E-04	7.9E-09	2.9E-06	--	--	--	--
Zinc	7440-66-6	Yes	No	632	9.8E-11	3.6E-08	2.6E-09	9 6E-07	1.1E-06	4.0E-04	1.1E-08	4.0E-06	--	--	--	--

Table 24
SSBO - PTE TAC Emissions Summary
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS/ODEQ ID	TAC? (Yes/No)	HAP? (Yes/No)	ODEQ Sequence Number	Estimates							
					Production Welding		Wax Fugitive		SLA		Facility Total	
					Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)
Organic Compounds												
Acetaldehyde	75-07-0	Yes	Yes	1	--	--	--	--	--	--	3.6E-03	1.31
Acetone	67-64-1	Yes	No	634	--	--	17.1	6 239	1.94	709	19 0	6 948
Benzene	71-43-2	Yes	Yes	46	--	--	--	--	--	--	0.29	107
1 3-Butadiene	106-99-0	Yes	Yes	75	--	--	--	--	--	--	6.4E-03	2.35
Butanol	71-36-3	Yes	No	78	--	--	1.8E-03	0 64	--	--	1.8E-03	0.64
Ethyl benzene	100-41-4	Yes	Yes	229	--	--	--	--	0.026	9.45	0 026	9.45
Ethyl chloride	75-00-3	Yes	Yes	230	--	--	--	--	--	--	4.4E-05	0 016
1 1-Difluoroethane	75-37-6	Yes	No	244	--	--	8.03	2 930	--	--	8.03	2 930
Diethylene glycol	111-46-6	Yes	No	258	--	--	--	--	--	--	0 044	0.62
Propylene glycol monomethyl ether	107-98-2	Yes	No	273	--	--	--	--	--	--	928	13 155
1-Methoxy-2-propyl acetate	108-65-6	Yes	No	274	--	--	--	p	0.47	170	0.47	170
Isopropyl alcohol	67-63-0	Yes	No	302	--	--	5.3E-04	0.19	--	--	108	1 526
Methanol	67-56-1	Yes	Yes	321	--	--	--	--	--	--	1.36	496
Methyl methacrylate	80-62-6	Yes	Yes	339	--	--	--	--	--	--	0.52	189
Naphthalene	91-20-3	Yes	Yes	428	--	--	--	--	--	--	0 041	15.0
Phenol	108-95-2	Yes	Yes	497	--	--	--	--	--	--	0 074	26.9
Triphenyl phosphate	115-86-6	Yes	No	516	--	--	3.5E-04	0.13	--	--	3.5E-04	0.13
Styrene	100-42-5	Yes	Yes	585	--	--	--	--	--	--	0 029	10.4
Toluene	108-88-3	Yes	Yes	600	--	--	--	--	--	--	0.26	94.4
Xylenes (mixed isomers)	1330-20-7	Yes	Yes	628	--	--	--	--	0.12	42 5	0.12	42.5
m-Xylene	108-38-3	Yes	Yes	629	--	--	--	--	--	--	0 046	16.7
Inorganic Compounds												
Hydrochloric acid	7647-01-0	Yes	Yes	292	--	--	--	--	--	--	0.14	50.0
Metals												
Aluminum	7429-90-5	Yes	No	13	3.3E-03	1.22	--	--	--	--	1.41	478
Antimony	7440-36-0	Yes	Yes	33	--	--	--	--	--	--	2.5E-04	0 092
Arsenic	7440-38-2	Yes	Yes	37	--	--	--	--	--	--	3.9E-05	0 011
Barium	7440-39-3	Yes	No	45	--	--	--	--	--	--	2.8E-07	1.0E-04
Cadmium	7440-43-9	Yes	Yes	83	--	--	--	--	--	--	7.3E-05	0 027
Chromium	7440-47-3	No	Yes	--	0 016	5.67	--	--	--	--	0 043	14.5
Chromium VI	18540-29-9	Yes	Yes	136	7.8E-04	0.28	--	--	--	--	7.8E-04	0.28
Cobalt	7440-48-4	Yes	Yes	146	0 033	12 2	--	--	--	--	0 035	12.7
Copper	7440-50-8	Yes	No	149	1.9E-03	0.70	--	--	--	--	0 025	9.06
Lead	7439-92-1	Yes	Yes	305	5.4E-07	2.0E-04	--	--	--	--	1.3E-03	0.44
Manganese	7439-96-5	Yes	Yes	312	4.1E-03	1.49	--	--	--	--	0 033	9.67
Mercury	7439-97-6	Yes	Yes	316	--	--	--	--	--	--	2.3E-14	3.4E-13
Molybdenum trioxide	1313-27-5	Yes	No	361	--	--	--	--	--	--	2.7E-12	2.2E-10
Nickel	7440-02-0	Yes	Yes	364	0 051	18 5	--	--	--	--	0 066	23.7
Nickel oxide	1313-99-1	Yes	Yes	366	--	--	--	--	--	--	2.1E-11	5.1E-09
Phosphorus	504	Yes	Yes	504	1.6E-05	6.0E-03	--	--	--	--	1.6E-05	6.0E-03
Selenium	7782-49-2	Yes	Yes	575	8.2E-08	3.0E-05	--	--	--	--	4.3E-05	1.0E-02
Silver	7440-22-4	Yes	No	580	5.4E-04	0.20	--	--	--	--	5.4E-04	0.20
Thallium	7440-28-0	Yes	No	595	--	--	--	--	--	--	2.3E-15	6.8E-14
Vanadium	7440-62-2	Yes	No	620	2.2E-03	0.80	--	--	--	--	2.3E-03	0.85
Zinc	7440-66-6	Yes	No	632	--	--	--	--	--	--	0 029	7.46

Table 25
SSB1 - Finishing, Grinding (ULPA) - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton PM generated)		Total Emissions Estimate	
				Daily	Annual	Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	18.6	18.6	1.0E-09	3.7E-07
Arsenic	7440-38-2	Yes	37	0.024	0.024	1.3E-12	4.8E-10
Barium	7440-39-3	No	45	0.044	0.044	2.4E-12	8.8E-10
Beryllium	7440-41-7	Yes	58	ND	ND	--	--
Cadmium	7440-43-9	Yes	83	ND	ND	--	--
Chromium	7440-47-3	Yes	--	318	318	1.7E-08	6.4E-06
Chromium VI	18540-29-9	Yes	136	2.6E-03	2.6E-03	1.4E-13	5.2E-11
Cobalt	7440-48-4	Yes	146	126	126	6.9E-09	2.5E-06
Copper	7440-50-8	No	149	2.60	2.60	1.4E-10	5.2E-08
Lead	7439-92-1	Yes	305	ND	ND	--	--
Manganese	7439-96-5	Yes	312	1.60	1.60	8.8E-11	3.2E-08
Mercury	7439-97-6	Yes	316	ND	ND	--	--
Nickel	7440-02-0	Yes	364	712	712	3.9E-08	1.4E-05
Selenium	7782-49-2	Yes	575	0.20	0.20	1.1E-11	4.0E-09
Silver	7440-22-4	No	580	0.034	0.034	1.9E-12	6.8E-10
Vanadium	7440-62-2	No	620	0.40	0.40	2.2E-11	8.0E-09
Zinc	7440-66-6	No	632	0.80	0.80	4.4E-11	1.6E-08

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (maximum daily PM generated [lb/day]) x (emission factor [lb/ton PM generated]) x (ton/2,000 lb) x (1 - [baghouse control efficiency {%}]/100)

Maximum daily PM generated (lb PM generated/day) = 11.0 (1)

Baghouse 8628 control efficiency (%) = 99.999999 (2)

(b) Annual emissions estimate (lb/yr) = (annual PM generated [ton/yr]) x (emission factor [lb/ton PM generated]) x (1 - [baghouse control efficiency {%}]/100)

Annual PM generated (tons PM generated/yr) = 2.00 (1)

Baghouse 8628 control efficiency (%) = 99.999999 (2)

REFERENCES:

(1) See Table D3, Source Group Emission Factors.

(2) See Table D4, Master Throughput and Production Rates.

Table 26
SSB1 - Finishing, Sandblast - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton PM generated)		Total Emissions Estimate	
				Daily	Annual	Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	42.6	42.6	8.0E-03	2.91
Arsenic	7440-38-2	Yes	37	0.013	0.013	2.4E-06	8.6E-04
Barium	7440-39-3	No	45	0.18	0.18	3.4E-05	0.012
Beryllium	7440-41-7	Yes	58	ND	ND	--	--
Cadmium	7440-43-9	Yes	83	ND	ND	--	--
Chromium	7440-47-3	Yes	--	204	204	0.038	13.9
Chromium VI	18540-29-9	Yes	136	2.4E-04	2.4E-04	4.5E-08	1.6E-05
Cobalt	7440-48-4	Yes	146	42.2	42.2	7.9E-03	2.88
Copper	7440-50-8	No	149	0.80	0.80	1.5E-04	0.055
Lead	7439-92-1	Yes	305	ND	ND	--	--
Manganese	7439-96-5	Yes	312	1.00	1.00	1.9E-04	0.068
Mercury	7439-97-6	Yes	316	ND	ND	--	--
Nickel	7440-02-0	Yes	364	556	556	0.10	38.0
Selenium	7782-49-2	Yes	575	ND	ND	--	--
Silver	7440-22-4	No	580	ND	ND	--	--
Vanadium	7440-62-2	No	620	0.10	0.10	1.9E-05	7.1E-03
Zinc	7440-66-6	No	632	0.17	0.17	3.2E-05	0.012

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (maximum daily PM generated [lb/day]) x (emission factor [lb/ton PM generated]) x (ton/2,000 lb) x (1 - [baghouse control efficiency {%}]/100)

Maximum daily PM generated (lb PM generated/day) = 374 (1)

Baghouse 8629 control efficiency (%) = 99.9 (2)

(b) Annual emissions estimate (lb/yr) = (annual PM generated [ton/yr]) x (emission factor [lb/ton PM generated]) x (1 - [baghouse control efficiency {%}]/100)

Annual PM generated (tons PM generated/yr) = 68.3 (1)

Baghouse 8629 control efficiency (%) = 99.9 (2)

REFERENCES:

(1) See Table D3, Source Group Emission Factors.

(2) See Table D4, Master Throughput and Production Rates.

Table 27
SSB1 - Cleaning, Burnoff - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton PM generated)		Total Emissions Estimate	
				Daily	Annual	Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	3.20	3.20	3.5E-06	1.3E-03
Arsenic	7440-38-2	Yes	37	0.032	0.032	3.5E-08	1.3E-05
Barium	7440-39-3	No	45	0.020	0.020	2.2E-08	8.0E-06
Beryllium	7440-41-7	Yes	58	ND	ND	--	--
Cadmium	7440-43-9	Yes	83	ND	ND	--	--
Chromium	7440-47-3	Yes	--	75.4	75.4	8.3E-05	0.030
Chromium VI	18540-29-9	Yes	136	2.80	2.80	3.1E-06	1.1E-03
Cobalt	7440-48-4	Yes	146	7.20	7.20	7.9E-06	2.9E-03
Copper	7440-50-8	No	149	35.4	35.4	3.9E-05	0.014
Lead	7439-92-1	Yes	305	8.2E-03	8.2E-03	9.0E-09	3.3E-06
Manganese	7439-96-5	Yes	312	6.60	6.60	7.2E-06	2.6E-03
Mercury	7439-97-6	Yes	316	ND	ND	--	--
Nickel	7440-02-0	Yes	364	170	170	1.9E-04	0.068
Selenium	7782-49-2	Yes	575	ND	ND	--	--
Silver	7440-22-4	No	580	ND	ND	--	--
Vanadium	7440-62-2	No	620	0.16	0.16	1.7E-07	6.2E-05
Zinc	7440-66-6	No	632	0.40	0.40	4.4E-07	1.6E-04

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (maximum daily PM generated [lb/day]) x (emission factor [lb/ton PM generated]) x (ton/2,000 lb) x (1 - [baghouse control efficiency {%}]/100)

Maximum daily PM generated (lb PM generated/day) = 2.19 (1)

Baghouse 9164 control efficiency (%) = 99.9 (2)

(b) Annual emissions estimate (lb/yr) = (annual PM generated [ton/yr]) x (emission factor [lb/ton PM generated]) x (1 - [baghouse control efficiency {%}]/100)

Annual PM generated (tons PM generated/yr) = 0.40 (1)

Baghouse 9164 control efficiency (%) = 99.9 (2)

REFERENCES:

(1) See Table D3, Source Group Emission Factors.

(2) See Table D4, Master Throughput and Production Rates.

Table 28
SSB1 - Finishing (ULPA) - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton PM generated)		Total Emissions Estimate	
				Daily	Annual	Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	42.6	42.6	1.2E-07	4.3E-05
Arsenic	7440-38-2	Yes	37	0.013	0.013	3.5E-11	1.3E-08
Barium	7440-39-3	No	45	0.18	0.18	5.0E-10	1.8E-07
Beryllium	7440-41-7	Yes	58	ND	ND	--	--
Cadmium	7440-43-9	Yes	83	ND	ND	--	--
Chromium	7440-47-3	Yes	--	204	204	5.6E-07	2.1E-04
Chromium VI	18540-29-9	Yes	136	2.4E-04	2.4E-04	6.6E-13	2.4E-10
Cobalt	7440-48-4	Yes	146	42.2	42.2	1.2E-07	4.3E-05
Copper	7440-50-8	No	149	0.80	0.80	2.2E-09	8.1E-07
Lead	7439-92-1	Yes	305	ND	ND	--	--
Manganese	7439-96-5	Yes	312	1.00	1.00	2.8E-09	1.0E-06
Mercury	7439-97-6	Yes	316	ND	ND	--	--
Nickel	7440-02-0	Yes	364	556	556	1.5E-06	5.6E-04
Selenium	7782-49-2	Yes	575	ND	ND	--	--
Silver	7440-22-4	No	580	ND	ND	--	--
Vanadium	7440-62-2	No	620	0.10	0.10	2.9E-10	1.1E-07
Zinc	7440-66-6	No	632	0.17	0.17	4.8E-10	1.7E-07

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (maximum daily PM generated [lb/day]) x (emission factor [lb/ton PM generated]) x (ton/2,000 lb) x (1 - [baghouse control efficiency {%}]/100)

Maximum daily PM generated (lb PM generated/day) = 553 (1)

Baghouse 9439 control efficiency (%) = 99.999999 (2)

(b) Annual emissions estimate (lb/yr) = (annual PM generated [ton/yr]) x (emission factor [lb/ton PM generated]) x (1 - [baghouse control efficiency {%}]/100)

Annual PM generated (tons PM generated/yr) = 101 (1)

Baghouse 9439 control efficiency (%) = 99.999999 (2)

REFERENCES:

(1) See Table D3, Source Group Emission Factors.

(2) See Table D4, Master Throughput and Production Rates.

Table 29
SSB1 - Commingled Building - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS	HAP? (Yes/No)	ODEQ Sequence Number	SSB1 Baghouse Total Emissions Estimate [1]		Total Fugitive Emissions Estimate	
				Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	8.0E-03	2.91	8.0E-05	0.029
Arsenic	7440-38-2	Yes	37	2.4E-06	8.7E-04	2.4E-08	8.7E-06
Barium	7440-39-3	No	45	3.4E-05	0.012	3.4E-07	1.2E-04
Beryllium	7440-41-7	Yes	58	--	--	--	--
Cadmium	7440-43-9	Yes	83	--	--	--	--
Chromium	7440-47-3	Yes	--	0.038	14.0	3.8E-04	0.14
Chromium VI	18540-29-9	Yes	136	3.1E-06	1.1E-03	3.1E-08	1.1E-05
Cobalt	7440-48-4	Yes	146	7.9E-03	2.88	7.9E-05	0.029
Copper	7440-50-8	No	149	1.9E-04	0.069	1.9E-06	6.9E-04
Lead	7439-92-1	Yes	305	9.0E-09	3.3E-06	9.0E-11	3.3E-08
Manganese	7439-96-5	Yes	312	1.9E-04	0.071	1.9E-06	7.1E-04
Mercury	7439-97-6	Yes	316	--	--	--	--
Nickel	7440-02-0	Yes	364	0.10	38.0	1.0E-03	0.38
Selenium	7782-49-2	Yes	575	1.1E-11	4.0E-09	1.1E-13	4.0E-11
Silver	7440-22-4	No	580	1.9E-12	6.8E-10	1.9E-14	6.8E-12
Vanadium	7440-62-2	No	620	2.0E-05	7.2E-03	2.0E-07	7.2E-05
Zinc	7440-66-6	No	632	3.3E-05	0.012	3.3E-07	1.2E-04

NOTES:

(a) Maximum daily emissions estimate (lb/day) = (maximum daily baghouse total emission estimate [lb/day]) x (0.01); see Reference (2).

(b) Annual emissions estimate (lb/yr) = (annual baghouse total emission estimate [lb/yr]) x (0.01); see Reference (2).

REFERENCES:

(1) Sum of the individual baghouse estimated emissions.

(2) Based on the assumption that fugitive emissions are equivalent to 1 percent of estimated pollutant emissions from baghouses.

Table 30
SSB1 - Heat Treat, Vacuum Furnace - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS/ODEQ ID	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton metal processed)	Total Emissions Estimate	
					Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	1.8E-03	3.4E-03	1.24
Antimony	7440-36-0	Yes	33	2.9E-05	5.4E-05	0.020
Arsenic	7440-38-2	Yes	37	ND	--	--
Barium	7440-39-3	No	45	0	--	--
Beryllium	7440-41-7	Yes	58	ND	--	--
Cadmium	7440-43-9	Yes	83	8.5E-06	1.6E-05	5.7E-03
Chromium	7440-47-3	Yes	--	2.7E-04	5.1E-04	0.18
Cobalt	7440-48-4	Yes	146	0	--	--
Copper	7440-50-8	No	149	9.0E-05	1.7E-04	0.060
Lead	7439-92-1	Yes	305	1.2E-04	2.2E-04	0.080
Manganese	7439-96-5	Yes	312	3.0E-05	5.6E-05	0.020
Mercury	7439-97-6	Yes	316	0	--	--
Nickel	7440-02-0	Yes	364	3.8E-05	7.0E-05	0.025
Phosphorus	504	Yes	504	0	--	--
Selenium	7782-49-2	Yes	575	ND	--	--
Silver	7440-22-4	No	580	ND	--	--
Thallium	7440-28-0	No	595	ND	--	--
Vanadium	7440-62-2	No	620	ND	--	--
Zinc	7440-66-6	No	632	0	--	--

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (emission factor [lb/ton metal processed]) x (maximum daily metal processed [lb/day]) x (ton/2,000 lb)

Maximum daily metal processed in vacuum/electric furnace (lb/day) = 3,699 (2)

(b) Annual emissions estimate (lb/yr) = (emission factor [lb/ton metal processed]) x (annual metal processed [ton/yr])

Annual metal processed in air casting vacuum/electric furnace (ton/yr) = 675 (2)

REFERENCES:

(1) Emission factor based on heat treat oven stack test for similar facility. Emission factors listed as zero values represent toxic air contaminants that are not assumed to originate from the the heat treat stack.

(2) See Table D4, Master Throughput and Production Rates.

Table 31
SSB1 - Heat Treat, Natural Gas Furnace - PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS/ODEQ ID	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor [1] (lb/ton metal processed)	Total Emissions Estimate	
					Maximum Daily [a] (lb/day)	Annual [b] (lb/yr)
Aluminum	7429-90-5	No	13	1.8E-03	3.4E-03	1.24
Antimony	7440-36-0	Yes	33	2.9E-05	5.4E-05	0.020
Arsenic	7440-38-2	Yes	37	ND	--	--
Barium	7440-39-3	No	45	0	--	--
Beryllium	7440-41-7	Yes	58	ND	--	--
Cadmium	7440-43-9	Yes	83	8.5E-06	1.6E-05	5.7E-03
Chromium	7440-47-3	Yes	--	2.7E-04	5.1E-04	0.18
Chromium VI	18540-29-9	Yes	136	1.6E-08	2.9E-08	1.1E-05
Cobalt	7440-48-4	Yes	146	0	--	--
Copper	7440-50-8	No	149	9.0E-05	1.7E-04	0.060
Lead	7439-92-1	Yes	305	1.2E-04	2.2E-04	0.080
Manganese	7439-96-5	Yes	312	3.0E-05	5.6E-05	0.020
Mercury	7439-97-6	Yes	316	0	--	--
Nickel	7440-02-0	Yes	364	3.8E-05	7.0E-05	0.025
Phosphorus	504	Yes	504	0	--	--
Selenium	7782-49-2	Yes	575	ND	--	--
Silver	7440-22-4	No	580	ND	--	--
Thallium	7440-28-0	No	595	ND	--	--
Vanadium	7440-62-2	No	620	ND	--	--
Zinc	7440-66-6	No	632	0	--	--

NOTES:

ND = all analysis results were below the method detection limit.

(a) Maximum daily emissions estimate (lb/day) = (emission factor [lb/ton metal processed]) x (maximum daily metal processed [lb/day]) x (ton/2,000 lb)

Maximum daily metal processed in vacuum/electric furnace (lb/day) = 3,699 (2)

(b) Annual emissions estimate (lb/yr) = (emission factor [lb/ton metal processed]) x (annual metal processed [ton/yr])

Annual metal processed in air casting vacuum/electric furnace (ton/yr) = 675 (2)

REFERENCES:

(1) Emission factor based on heat treat oven stack test for similar facility. Emission factors listed as zero values represent toxic air contaminants that are not assumed to originate from the the heat treat stack.

(2) See Table D4, Master Throughput and Production Rates.

Table 32
SSB1 - PTE TAC Emission Summary
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS/ODEQ ID	TAC? (Yes/No)	HAP? (Yes/No)	ODEQ Sequence Number	Emissions Estimates											
					Cleaning		Finishing		Commingled		Heat Treat				Facility Total	
											Vacuum/Electric		Natural Gas			
					Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)
Aluminum	7429-90-5	Yes	No	13	3 5E-06	1 3E-03	8 0E-03	2 91	8 0E-05	0 029	3 4E-03	1 24	3 4E-03	1 24	0 015	5 41
Antimony	7440-36-0	Yes	Yes	33	--	--	--	--	--	--	5 4E-05	0 020	5 4E-05	0 020	1 1E-04	0 039
Arsenic	7440-38-2	Yes	Yes	37	3 5E-08	1 3E-05	2 4E-06	8 6E-04	2 4E-08	8 7E-06	--	--	--	--	2 4E-06	8 8E-04
Barium	7440-39-3	Yes	No	45	2 2E-08	8 0E-06	3 4E-05	0 012	3 4E-07	1 2E-04	--	--	--	--	3 4E-05	0 012
Cadmium	7440-43-9	Yes	Yes	83	--	--	--	--	--	--	1 6E-05	5 7E-03	1 6E-05	5 7E-03	3 1E-05	0 011
Chromium	7440-47-3	No	Yes	--	8 3E-05	0 030	0 038	13 9	3 8E-04	0 14	5 1E-04	0 18	5 1E-04	0 18	0 040	14 5
Chromium VI	18540-29-9	Yes	Yes	136	3 1E-06	1 1E-03	4 5E-08	1 6E-05	3 1E-08	1 1E-05	--	--	2 9E-08	1 1E-05	3 2E-06	1 2E-03
Cobalt	7440-48-4	Yes	Yes	146	7 9E-06	2 9E-03	7 9E-03	2 88	7 9E-05	0 029	--	--	--	--	8 0E-03	2 91
Copper	7440-50-8	Yes	No	149	3 9E-05	0 014	1 5E-04	0 055	1 9E-06	6 9E-04	1 7E-04	0 060	1 7E-04	0 060	5 2E-04	0 19
Lead	7439-92-1	Yes	Yes	305	9 0E-09	3 3E-06	--	--	9 0E-11	3 3E-08	2 2E-04	0 080	2 2E-04	0 080	4 4E-04	0 16
Manganese	7439-96-5	Yes	Yes	312	7 2E-06	2 6E-03	1 9E-04	0 068	1 9E-06	7 1E-04	5 6E-05	0 020	5 6E-05	0 020	3 1E-04	0 11
Nickel	7440-02-0	Yes	Yes	364	1 9E-04	0 068	0 10	38 0	1 0E-03	0 38	7 0E-05	0 025	7 0E-05	0 025	0 11	38 5
Selenium	7782-49-2	Yes	Yes	575	--	--	1 1E-11	4 0E-09	1 1E-13	4 0E-11	--	--	--	--	1 1E-11	4 0E-09
Silver	7440-22-4	Yes	No	580	--	--	1 9E-12	6 8E-10	1 9E-14	6 8E-12	--	--	--	--	1 9E-12	6 9E-10
Vanadium	7440-62-2	Yes	No	620	1 7E-07	6 2E-05	1 9E-05	7 1E-03	2 0E-07	7 2E-05	--	--	--	--	2 0E-05	7 2E-03
Zinc	7440-66-6	Yes	No	632	4 4E-07	1 6E-04	3 2E-05	0 012	3 3E-07	1 2E-04	--	--	--	--	3 3E-05	0 012

Table 33
SSBO Facility Wide Natural Gas Combustion PTE TAC Emissions Estimates
PCC Structurals, Inc. - SSBO - PTE

Parameter		SSBO	SSB1
Daily Natural Gas Fuel Usage (MMscf/day)	(1)	2.08	0.063
Annual Natural Gas Fuel Usage (MMscf/yr)	(1)	761	23 0

Toxic Air Contaminant	CAS/ODEQ ID	HAP? (Yes/No)	ODEQ Sequence Number	Emission Factor (2) (lb/MMscf)	Emissions Estimate					
					SSBO		SSB1		Total	
					Maximum Daily (a) (lb/day)	Annual (b) (lb/yr)	Maximum Daily (a) (lb/day)	Annual (b) (lb/yr)	Maximum Daily (lb/day)	Annual (lb/yr)
Organic Compounds										
Acetaldehyde	75-07-0	Yes	1	4.30E-03 (2)	9.0E-03	3.27	2.7E-04	0.099	9.2E-03	3.37
Acrolein	107-02-8	Yes	5	2.70E-03 (2)	5.6E-03	2.05	1.7E-04	0.062	5.8E-03	2.12
Benzene	71-43-2	Yes	46	8.00E-03 (2)	0.017	6.09	5.0E-04	0.18	0.017	6.27
Ethyl benzene	100-41-4	Yes	229	9.50E-03 (2)	0.020	7.23	6.0E-04	0.22	0.020	7.45
Formaldehyde	50-00-0	Yes	250	0.017 (2)	0.035	12.9	1.1E-03	0.39	0.037	13.3
Hexane	110-54-3	Yes	289	6.30E-03 (2)	0.013	4.79	4.0E-04	0.14	0.014	4.94
Toluene	108-88-3	Yes	600	3.66E-02 (2)	0.076	27.9	2.3E-03	0.84	0.079	28.7
Xylenes (mixed isomers)	1330-20-7	Yes	628	0.0272 (2)	0.057	20.7	1.7E-03	0.63	0.058	21.3
Polycyclic Aromatic Hydrocarbons (PAHs)										
PAHs	432	Yes	432	1.00E-04 (2)	2.1E-04	0.076	6.3E-06	2 3E-03	2.1E-04	0 078
Benzo[a]pyrene	50-32-8	Yes	406	1.20E-06 (2)	2.5E-06	9.1E-04	7.6E-08	2 8E-05	2.6E-06	9.4E-04
Naphthalene	91-20-3	Yes	428	3.00E-04 (2)	6.3E-04	0.23	1.9E-05	6.9E-03	6.4E-04	0.24
Inorganic Compounds										
Ammonia	7664-41-7	No	26	3.2 (3)	6 67	2 435	0 20	73.6	6.87	2 509
Molybdenum trioxide	1313-27-5	No	361	1.65E-03 (2)	3.4E-03	1.26	1.0E-04	0.038	3.5E-03	1.29
Metals										
Arsenic	7440-38-2	Yes	37	2.00E-04 (2)	4.2E-04	0.15	1.3E-05	4 6E-03	4.3E-04	0.16
Barium	7440-39-3	No	45	4.40E-03 (2)	9.2E-03	3.35	2.8E-04	0.10	9.5E-03	3.45
Beryllium	7440-41-7	Yes	58	1.20E-05 (2)	2.5E-05	9.1E-03	7.6E-07	2 8E-04	2.6E-05	9.4E-03
Cadmium	7440-43-9	Yes	83	1.10E-03 (2)	2.3E-03	0.84	6.9E-05	0.025	2.4E-03	0.86
Chromium	7440-47-3	Yes	--	1.40E-03 (2)	2.9E-03	1.07	8.8E-05	0.032	3.0E-03	1.10
Chromium VI	18540-29-9	Yes	136	5.60E-05 (c)	1.2E-04	0.043	3.5E-06	1 3E-03	1.2E-04	0 044
Cobalt	7440-48-4	Yes	146	8.40E-05 (2)	1.8E-04	0.064	5.3E-06	1.9E-03	1.8E-04	0 066
Copper	7440-50-8	No	149	8.50E-04 (2)	1.8E-03	0.65	5.4E-05	0.020	1.8E-03	0.67
Lead	7439-92-1	Yes	305	5.00E-04 (2)	1.0E-03	0.38	3.2E-05	0.012	1.1E-03	0.39
Manganese	7439-96-5	Yes	312	3.80E-04 (2)	7.9E-04	0.29	2.4E-05	8.7E-03	8.2E-04	0.30
Mercury	7439-97-6	Yes	316	2.60E-04 (2)	5.4E-04	0.20	1.6E-05	6 0E-03	5.6E-04	0.20
Nickel	7440-02-0	Yes	364	2.10E-03 (2)	4.4E-03	1.60	1.3E-04	0.048	4.5E-03	1.65
Selenium	7782-49-2	Yes	575	2.40E-05 (2)	5.0E-05	0.018	1.5E-06	5 5E-04	5.2E-05	0 019
Vanadium	7440-62-2	No	620	2.30E-03 (2)	4.8E-03	1.75	1.4E-04	0.053	4.9E-03	1.80
Zinc	7440-66-6	No	632	2.90E-02 (2)	0.060	22.1	1.8E-03	0.67	0.062	22.7

NOTES:

(a) Daily emissions estimate (lb/day) = (emission factor [lb/MMscf]) x (daily natural gas fuel usage [MMscf/day])

(b) Annual emissions estimate (lb/yr) = (emission factor [lb/MMscf]) x (annual natural gas fuel usage [MMscf/yr])

(c) Chromium VI emission factor (MMscf/yr) = (chromium and compounds emission factor [lb/MMscf]) x (percentage of total chromium [%])/100

Chromium VI percentage of total chromium (%) = 4.00 (4)

REFERENCES:

(1) See Table D4 Master Throughput and Production Rates.

(2) Emission factors provided by Oregon Department of Environmental Quality for Natural Gas External Combustion Sources. Emission factors for sources <10 MMBtu/hr were used.

(3) EPA Webfire Clearinghouse for Inventories and Emission Factors. Assumes uncontrolled natural gas combustion.

(4) Based on assumptions used by the EPA as outlined in the 2011 National Emissions Inventory. EPA assumes that 4% of chromium emitted during natural gas combustion is in the form of hexavalent chromium.

Table 34
SSBO Total Facility PTE TAC Emissions Summary
PCC Structurals, Inc. - SSBO - PTE

Toxic Air Contaminant	CAS/ODEQ ID	HAP? (Yes/No)	ODEQ Sequence Number	Emissions Estimates							
				SSBO		SSB1		Natural Gas Combustion		Facility Total	
				Maximum Daily (lb/day)	Annual (lbs/yr)	Maximum Daily (lb/day)	Annual (lbs/yr)	Maximum Daily (lb/day)	Annual (lbs/yr)	Maximum Daily (lb/day)	Annual (lbs/yr)
Organic Compounds											
Acetaldehyde	75-07-0	Yes	1	3 6E-03	1 31	--	--	9.2E-03	3.37	0.013	4 68
Acetone	67-64-1	No	634	19.0	6 948	--	--	--	--	19.0	6 948
Acrolein	107-02-8	Yes	5	--	--	--	--	5.8E-03	2.12	5 8E-03	2.12
Benzene	71-43-2	Yes	46	0.29	107	--	--	0.017	6.27	0 31	113
Biphenyl	92-52-4	Yes	62	--	--	--	--	--	--	--	--
1 3 Butadiene	106-99-0	Yes	75	6.4E-03	2 35	--	--	--	--	6.4E-03	2 35
Butanol	71-36-3	No	78	1 8E-03	0 64	--	--	--	--	1 8E-03	0 64
Ethyl benzene	100-41-4	Yes	229	0.026	9.45	--	--	0.020	7.45	0.046	16.9
Ethyl chloride	75-00-3	Yes	230	4.4E-05	0.016	--	--	--	--	4.4E-05	0 016
1 1-Difluoroethane	75-37-6	No	244	8.03	2 930	--	--	--	--	8 03	2 930
Formaldehyde	50-00-0	Yes	250	--	--	--	--	0.037	13 3	0.037	13.3
Diethylene glycol	111-46-6	No	258	0.044	0 62	--	--	--	--	0.044	0 62
Propylene glycol monomethyl ether	107-98-2	No	273	928	13 155	--	--	--	--	928	13 155
2-Propanol 1-methoxy- acetate	108-65-6	No	274	0.47	170	--	--	--	--	0.47	170
Hexane	110-54-3	Yes	289	--	--	--	--	0.014	4.94	0.014	4.94
Isopropyl alcohol	67-63-0	No	302	108	1 526	--	--	--	--	108	1 526
Methanol	67-56-1	Yes	321	1.36	496	--	--	--	--	1 36	496
Methyl methacrylate	80-62-6	Yes	339	0.52	189	--	--	--	--	0 52	189
Phenol	108-95-2	Yes	497	0.074	26.9	--	--	--	--	0.074	26.9
Triphenyl phosphate	115-86-6	No	516	3 5E-04	0.13	--	--	--	--	3 5E-04	0.13
Styrene	100-42-5	Yes	585	0.029	10.4	--	--	--	--	0.029	10.4
Toluene	108-88-3	Yes	600	0.26	94.4	--	--	0.079	28 7	0 34	123
m-Xylene	108-38-3	Yes	629	0.046	16.7	--	--	--	--	0.046	16.7
Xylenes (mixed isomers)	1330-20-7	Yes	628	0.12	42.5	--	--	0.058	21 3	0.17	63.9
Polycyclic Aromatic Hydrocarbons (PAHs)											
PAHs	432	Yes	432	--	--	--	--	2.1E-04	0 078	2.1E-04	0 078
Benzo[a]pyrene	50-32-8	Yes	406	--	--	--	--	2.6E-06	9.4E-04	2 6E-06	9.4E-04
Naphthalene	91-20-3	Yes	428	0.041	15.0	--	--	6.4E-04	0.24	0.042	15.2
Inorganic Compounds											
Ammonia	7664-41-7	No	26	--	--	--	--	6 87	2 509	6 87	2 509
Hydrochloric acid	7647-01-0	Yes	292	0.14	50.0	--	--	--	--	0.14	50.0
Metals											
Aluminum oxide	1344-28-1	No	14	--	--	--	--	--	--	--	--
Aluminum	7429-90-5	No	13	1.41	478	0 015	5.41	--	--	1.43	484
Antimony	7440-36-0	Yes	33	2 5E-04	0.092	1.1E-04	0.039	--	--	3 6E-04	0.13
Arsenic	7440-38-2	Yes	37	3.9E-05	0.011	2.4E-06	8 8E-04	4.3E-04	0.16	4 7E-04	0.17
Barium	7440-39-3	No	45	2 8E-07	1.0E-04	3.4E-05	0.012	9.5E-03	3.45	9 5E-03	3.46
Beryllium	7440-41-7	Yes	58	--	--	--	--	2.6E-05	9.4E-03	2 6E-05	9.4E-03
Cadmium	7440-43-9	Yes	83	7 3E-05	0.027	3.1E-05	0.011	2.4E-03	0.86	2 5E-03	0.90
Chromium	7440-47-3	Yes	--	0.043	14.5	0 040	14.5	3.0E-03	1.10	0.086	30.0
Chromium VI	18540-29-9	Yes	136	7 8E-04	0 28	3.2E-06	1 2E-03	1.2E-04	0 044	9 0E-04	0 33
Cobalt	7440-48-4	Yes	146	0.035	12.7	8.0E-03	2.91	1.8E-04	0 066	0.043	15.6
Copper	7440-50-8	No	149	0.025	9 06	5.2E-04	0.19	1.8E-03	0.67	0.027	9.92
Lead	7439-92-1	Yes	305	1 3E-03	0.44	4.4E-04	0.16	1.1E-03	0.39	2 8E-03	0.99
Manganese	7439-96-5	Yes	312	0.033	9 67	3.1E-04	0.11	8.2E-04	0.30	0.034	10.1
Mercury	7439-97-6	Yes	316	2 3E-14	3.4E-13	--	--	5.6E-04	0.20	5 6E-04	0 20
Molybdenum trioxide	1313-27-5	No	361	2 7E-12	2.2E-10	--	--	3.5E-03	1.29	3 5E-03	1 29
Nickel	7440-02-0	Yes	364	0.066	23.7	0.11	38.5	4.5E-03	1.65	0.18	63.8
Nickel oxide	1313-99-1	Yes	366	2.1E-11	5.1E-09	--	--	--	--	2.1E-11	5.1E-09
Phosphorus	504	Yes	504	1 6E-05	6.0E-03	--	--	--	--	1 6E-05	6.0E-03
Selenium	7782-49-2	Yes	575	4 3E-05	1.0E-02	1.1E-11	4 0E-09	5.2E-05	0 019	9.4E-05	0 029
Silver	7440-22-4	No	580	5.4E-04	0 20	1.9E-12	6.9E-10	--	--	5.4E-04	0 20
Thallium	7440-28-0	No	595	2 3E-15	6.8E-14	--	--	--	--	2 3E-15	6.8E-14
Vanadium	7440-62-2	No	620	2 3E-03	0 85	2.0E-05	7 2E-03	4.9E-03	1.80	7 3E-03	2 66
Zinc	7440-66-6	No	632	0.029	7.46	3.3E-05	0.012	0.062	22 7	0.091	30.2