



Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces

Source Tested Units ≤ 30 ppm

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners (Number x Heat Rating: MMBtu/hr)	MMBTU/hr Input	Operating Temperature Range (°F)	Source Test Date	Actual Source Test Temperature (°F)	Permit Limit (ppm @ 3% O2)	Source Test Result (ppm @ 3% O2)	Firing Capacity During Source Test (% of maximum)	Excess O2 During Source Test (%)	CO Concentration During Source Test (ppm @ 3% O2)
Aging	3714	Y	New	Not Listed	1x2.5; 1x1.5	4	350	5/12/2004	Not Listed	12	11.56	Not Listed	17.2	63.18
Aging	3354	Y	New	North American: 4988-2500 Zephyr	1x2.5	2.5	680-900	5/4/2004	Not Listed	65	16.3	Not Listed	19.13	Not Listed
Aging	3354	Y	New	Not Listed	Not Listed	2.5	680-900	4/11/2013	Not Listed	40	25.2	79	17	Not Listed
Aging	3354	Y	New	Not Listed	1x2.5	2.5	680-900	6/10/2013	Not Listed	40	26.2	48	18.2	<65.6
Aging	3354	Y	Retrofit	Maxon: EB4PAKT	2x2.7	5.4	680-900	4/17/2015	Not Listed	30	12.7	73	16.8	3*
Aging	3354	Y	Retrofit	Maxon: EB3-PAKT	multiple	3.4	680-900	10/8/2014	Not Listed	30	13.8	31	17.11	32.58
Aging	Not Listed	N	New	Eclipse: WX300	1x3	3	340-420	1/13/2006	400	50	4.6	33	19.03	839
								200	0.01		8	20.5	1,498	
Aging	Not Listed	N	New	Maxon: Ovenpak LE-13	2x2.7	5.4	1,000	4/28/2017	650	50	29.05	96	12.74	59.67
								630	27.81		62	15.55	96.4	
Aging	3365	N	Retrofit	Not Listed	2x2	4	875-1,000	7/15/2011	Not Listed	60	21.94	Not Listed	11.89	72.46
Annealing	3315	Y	Retrofit	Not Listed	Not Listed	12	Not Listed	10/9/2018	Not Listed	75	26.44	Not Listed	Not Listed	Not Listed
Annealing	3315	N	Not Listed	Eclipse: 84DSF	6x0.35	2.12	1,220-1,400	5/13/2013	Not Listed	60	20.1	Not Listed	5.75	11,817
Billet & Pre-Heat	3354	Y	Retrofit	Not Listed	Not Listed	5.43	680-900	10/8/2014	Not Listed	30	13.4	51	12.7	80.34
Billet & Pre-Heat	3354	Y	Not Listed	Not Listed	Not Listed	5.443	680-950	4/17/2015	580	30	15.3	22	14.5	342
Billet & Pre-Heat	3354	Y	Not Listed	Not Listed	Not Listed	5.47	680-950	4/10/2013	Not Listed	25	16.4	25	15.2	Not Listed
Billet & Pre-Heat	3341	Y	New	Granco-Clark	82x0.06; 4x0.04	5.08	Not Listed	10/9/2015	350	50	26.6	28	17.5	116
Billet & Pre-Heat	3354	Y	Not Listed	Not Listed	4x1.8	7.2	680-950	5/4/2004	Not Listed	30	29.2	Not Listed	15	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Listed	Maxon: M-PAKT	2x2.5	5	900	6/6/2007	Not Listed	50	10.9	17	17.7	47.9
Billet & Pre-Heat									Not Listed		10.9	97	9.3	14.5
Billet & Pre-Heat	3354	N	New	Bassini: FB18; FB40	Not Listed	6.548	900	5/17/2010	Not Listed	50	19.2	Not Listed	18.15	1,490
Billet & Pre-Heat	3312	N	Retrofit	Eclipse: Winnox WX100	2x1.3	2.6	880-1,000	3/24/2010	Not Listed	50	25	Not Listed	Not Listed	Not Listed
Billet & Pre-Heat	3463	N	New	Bloom: 1480-035	8x1.5	12	1,750-2,150	8/8/2001	Not Listed	40	25.38	Not Listed	Not Listed	Not Listed
Billet & Pre-Heat	3312	N	Not Listed	Eclipse: WX300	1x3	3	800-850	8/8/2017	850	50	25.4	17	15.09	89.1
Billet & Pre-Heat	3463	N	Not Listed	Eclipse: Winnox WX100	4x1	4	900	12/2/2016	600	30	27.7	88	8.1	<28
Forging & Drop Forge	3463	Y	Not Listed	Hauck: Star, FGR	2x2	4	1,900-2,150	11/2/2001	Not Listed	50	21.07	Not Listed	2.94	3.84
Forging & Drop Forge	3463	Y	Not Listed	Hauck: Star, FGR	2x2	4	1,900-2,150	11/2/2001	Not Listed	50	21.13	Not Listed	3.15	8.1
Forging & Drop Forge	3462	Y	New	Eclipse: FN100	6x1	6	1,600-2,200	10/19/2014	Not Listed	50	6.81	Not Listed	Not Listed	Not Listed
Forging & Drop Forge	3462	Y	New	Eclipse: FN100	6x1	6	1,600-2,200	10/19/2014	Not Listed	50	6.81	Not Listed	Not Listed	Not Listed
Forging & Drop Forge	3462	Y	Retrofit	Eclipse: Winnox 500	1x5	5	800-900	10/19/2014	Not Listed	50	6.81	Not Listed	Not Listed	Not Listed
Forging & Drop Forge	3462	Y	Retrofit	Eclipse: Winnox 500	1x5	5	800-900	10/5/2014	Not Listed	50	9.87	33	15.67	28
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: FN150	2x1.5	3	1,600-2,200	6/24/2018	Not Listed	50	10.16	102	3.24	0.39*
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: FN150	2x1.5	3	1,600-2,200	7/30/2017	Not Listed	50	11	97	1.5	90
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: FN150	2x1.5	3	1,600-2,200	7/8/2018	Not Listed	50	12.25	1	2.22	0.56*
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: FN150	2x1.5	3	1,600-2,200	6/13/2009	Not Listed	50	13.68	Not Listed	1.32	<182.8
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: FN150	2x1.5	3	1,600-2,200	7/30/2017	Not Listed	50	14.9	97	1.4	21.7
Forging & Drop Forge	3463	Y	Not Listed	Maxon: Kinedizer-LE	2x2.6	5.2	1,900-2,400	8/18/2015	Not Listed	50	18.3	Not Listed	8.44	Not Listed
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: FN150	2x1.5	3	1,600-2,200	9/23/2018	Not Listed	50	19.3	95	4.25	21.34*
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: FN100	6x1	6	1,600-2,200	7/8/2018	Not Listed	50	22.7	93	4.15	1.21

* Not corrected to 3% O2; ^ RECLAIM emission factor (lb/MMScf)



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Source Tested Units ≤ 30 ppm

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners (Number x Heat Rating: MMBtu/hr)	MMBTU/hr Input	Operating Temperature Range (°F)	Source Test Date	Actual Source Test Temperature (°F)	Permit Limit (ppm @ 3% O ₂)	Source Test Result (ppm @ 3% O ₂)	Firing Capacity During Source Test (% of maximum)	Excess O ₂ During Source Test (%)	CO Concentration During Source Test (ppm @ 3% O ₂)
Forging & Drop Forge	3463	Y	Not Listed	Eclipse: TJ300	2x3	6	1,900-2,400	7/12/2008	Not Listed	50	22.66	Not Listed	4.97	<44.95
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: TJ100	6x1	6	1,600-2,200	8/10/2018	Not Listed	50	22.79	87	4.81	6.23*
Forging & Drop Forge	3462	Y	Retrofit	Hotwork: HV300	8x1	8	2,300	9/18/2012	>1,200	50	24.79	75	4.24	<21.5
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: FN150	2x1.5	3	1,600-2,200	11/4/2012	>1,200	50	26.5	92	4.54	<21.88
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: TJ100	6x1	6	1,600-2,200	10/26/2018	Not Listed	50	26.98	87	5.25	1
Forging & Drop Forge	3463	Y	Retrofit	Maxon: Kinedizer LE	2x1.5	3	1,900-2,150	5/22/2010	Not Listed	50	29.5	Not Listed	7.99	13.9
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: FN150	2x1.5	3	1,725-2,150	3/31/2015	1,750	50	17.3	36	3.97	<21.2
Forging & Drop Forge	3462	N	New	North American: Tempest	6x1	6	1,750-2,100	11/25/2015	1,600-2,100	50	18.2	100	<1	134
Forging & Drop Forge	3462	Y	New	Eclipse: FN150	6x1.5	9	1,725-2,150	7/12/2013	Not Listed	50	25.1	Not Listed	2.17	23.7
Forging & Drop Forge	3312	N	Not Listed	Maxon: Kinedizer LE	2x2.6	5.2	2,200	2/9/2018	1,800	50	29.1	48	8.9	<3.28
Other - Heating	3354	Y	New	Not Listed	Not Listed	5.4	970	3/8/2018	Not Listed	25	15.4	27	14.78	Not Listed
Other - Heating	3312	N	New	Hauck: SSVG 110B; Hauck SSVG 112B	6x0.135; 8x0.247	2.786	Not Listed	8/29/2005	Not Listed	50	19.46	89	Not Listed	Not Listed
Other - Heating	3354	Y	New	Not Listed	Not Listed	5.4	970	6/11/2013	Not Listed	25	20.6	27	10.72	Not Listed
Other - Heating	3312	N	Not Listed	Hauck: SSVG 110B; Hauck SSVG 112B	6x0.135; 8x0.247	2.786	Not Listed	8/29/2005	Not Listed	50	20.8	91	Not Listed	Not Listed
Other - Heating	3398	N	Not Listed	North American: Tempest S4442-3; S4442-5	Not Listed	7	1,700-2,150	8/13/2016	Not Listed	50	25.56	Not Listed	Not Listed	Not Listed
Other - Heating	3714	Y	Not Listed	Eclipse	9x0.621	5.585	1,000	6/17/2003	Not Listed	130^	29.58	105	15.64	1,720
Homogenizing	3341	Y	New	Eclipse: WX400; WX100	2x4.9; 2x1.3	12.4	843	4/8/2015	630	45	13.3	81	6.92	12.8
Homogenizing	3341	Y	Retrofit	Eclipse: WX400; WX100	2x4.9; 2x1.3	12.4	843	4/8/2015	540	45	15.5	17	15.1	30.9
Homogenizing	3354	Y	Not Listed	Maxon: 6" Kinemax	4x6	24	1,000-1,100	3/25/2015	Not Listed	40	18.5	98	6.82	<127
Homogenizing	3341	Y	New	Eclipse: WX400; WX100	2x4.9; 2x1.3	12.4	843	4/9/2015	840	45	26.4	33	10.5	<17.1
Homogenizing	3354	Y	Not Listed	Not Listed	Not Listed	14	1,060	3/25/2009	Not Listed	40	26.9	91	7.46	Not Listed
Homogenizing	3341	Y	New	Eclipse: WX400; WX100	Not Listed	12.4	843	4/7/2015	580	45	27.2	60	5.93	47.8
Homogenizing	3354	Y	Not Listed	Eclipse: WX500	6x5	30	1,065	Not Listed	Not Listed	50	15	Not Listed	Not Listed	Not Listed
Homogenizing	3341	Y	Not Listed	Eclipse: WX400; WX100	2x4.9; 2x1.3	12.4	843	4/7/2015	Not Listed	45	22.4	15	17.7	<56.1
Re-Heat	3312	Y	New	Techint Technologies: TSX18, TSX20, TSX20R2; TSX20R1; TSX14R2; TSX14R1; TRX 4; TS12	6x15.5; 6x18.5; 8x20; 8x20; 8x11; 8x11; 30x0.98x 6x8	529.4	2,400	2/4/2011	2,400	50	24.6	Not Listed	Not Listed	19.3

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Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners (Number x Heat Rating: MMBtu/hr)	MMBTU/hr Input	Operating Temperature Range (°F)	Source Test Date	Actual Source Test Temperature (°F)	Permit Limit (ppm @ 3% O ₂)	Source Test Result (ppm @ 3% O ₂)	Firing Capacity During Source Test (% of maximum)	Excess O ₂ During Source Test (%)	CO Concentration During Source Test (ppm @ 3% O ₂)
Holding	3369	N	New	Eclipse: 4 EAH Box Burner	1x0.3	0.3	600	7/27/2012	Not Listed	60	13.24	Not Listed	3.04	>200.45
Reverberatory	3341	Y	Retrofit	North American: 4821 12 R	2x10	20	1,800-2,100	4/2/2001	1,200	45	20.9	91	5.8	17.9
Reverberatory	3341	Y	Retrofit	North American: 4821-12-R	2x10	20	1,800-2,100	4/2/2001	Not Listed	45	22.6	100	7.8	6.8
Reverberatory	3354	Y	New	North American: 4343-12-B (TwinBed II Regenerative)	1x25	25	1,400-2,000	7/6/2012	Not Listed	40	25.4	85	2	Not Listed

Units Moved from > 30 ppm Group

Aging	3354	Y	New	Not Listed	Not Listed	2.5	680-900	3/8/2018	Not Listed	40	23.8	89	14.83	16.8*
Billet & Pre-Heat	3341	Y	New	Granco-Clark	116x0.006; 8x0.004	7.28	Not Listed	2/21/2019	Not Listed	50	24.7	45	17.4	128

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Source Tested Units > 30 ppm

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners (Number x Heat Rating: MMBtu/hr)	MMBTU/hr Input	Operating Temperature Range (°F)	Source Test Date	Actual Source Test Temperature (°F)	Permit Limit (ppm @ 3% O ₂)	Source Test Result (ppm @ 3% O ₂)	Furnace Type	Firing Capacity During Source Test (% of maximum)	Excess O ₂ During Source Test (%)	CO Concentration During Source Test (ppm @ 3% O ₂)
Aging	3354	Y	New	North American: 4988-2500 Zephyr	1x2.5	2.5	680-900	4/10/2013	Not Listed	40	32.3	Not Listed	Not Listed	Not Listed	Not Listed
Aging	3354	Y	New	Not Listed	1x2.5	2.5	680-900	4/10/2013	Not Listed	40	32.3	Not Listed	50	17.3	103
Aging	3354	N	Retrofit	Bloom: 2300-056 (Large Capacity Burner)	4x	3.8216	350	3/22/2016	150-290	50	34.7	Not Listed	110	12.75	63
Aging	3341	N	New	Maxon: Cyclomax	1x2.7	2.7	350	9/12/2001	Not Listed	50	34.85	Not Listed	Not Listed	Not Listed	Not Listed
Aging	3354	N	Retrofit	Bloom: 2300-056 (Large Capacity Burner)	4x	3.8216	350	3/22/2016	Not Listed	50	35.8	Not Listed	Not Listed	14.28	68.3
Aging	3351	N	New	Not Listed	Not Listed	2.5	Not Listed	2/22/2013	400	60	57.31	Not Listed	86	18.9	1,019
Annealing	3315	Y	Retrofit	I.C.E. Immersion Burner Rev. 1	10x0.225	12	860	11/5/2009	Not Listed	75	76.64	Not Listed	Not Listed	14.8	902
Annealing	3312	Y	Retrofit	North American: (4725-2-E); Eclipse: SER600-VCO	180 total (127x0.233; 22x0.14; 30x24.369; 1x1)	121.88	Not Listed	11/30/2018	Not Listed	130 [^]	115	Not Listed	Not Listed	Not Listed	Not Listed
Annealing	3398	N	New	Eclipse: 104HVTA	2x1.5	3	1,250-1,750	9/20/2001	Not Listed	60	34.61	Not Listed	Not Listed	13.87	Not Listed
Annealing	3398	N	New	Eclipse: 104HVTA	2x1.5	3	1,250-1,750	9/20/2001	Not Listed	60	39.42	Not Listed	Not Listed	15.89	Not Listed
Annealing	3354	N	New	Maxon: Kinedizer LE	1x2.5	2.5	1,100	9/6/2016	840	50	39.6	Not Listed	26	16.8	153*
Annealing	3315	N	New	Maxon: 36610	Not Listed	4	1,220-1,400	5/13/2013	780	60	30.6	Not Listed	66	13.9	223*
Annealing	3315	N	New	Maxon: 36610	Not Listed	4	1,220-1,400	5/13/2013	1,400	60	40.6	Not Listed	52	11.47	32
Billet & Pre-Heat	3341	Y	New	Belco: CE0225, CE0210, CE0220	146 total (8x0.05; 20x0.06; 118x0.05)	7.875	Not Listed	10/7/2015	Not Listed	50	32.6	Not Listed	Not Listed	Not Listed	Not Listed
Billet & Pre-Heat	3351	N	Not Listed	Not Listed	Not Listed	3	Not Listed	2/22/2013	800	60	49.9	Not Listed	42	20.74	2,994
Billet & Pre-Heat	3312	N	New	Eclipse: TJ150	4x1.5	6	220	6/5/2013	Not Listed	50	56.1	Box	Not Listed	Not Listed	Not Listed
Billet & Pre-Heat	Not Listed	N	New	Hotwork: HV300	4x1	4	2,050	11/21/2012	Not Listed	50	43.33	Not Listed	25	0.39	17.45
Billet & Pre-Heat	3462	Y	Retrofit	Hotwork: HV400	6x2	12	2,300	12/3/2013	Not Listed	50	44.7	Not Listed	28	5.41	46.2
Billet & Pre-Heat	3312	N	New	Eclipse: TJ150	4x1.5	6	1,750-2,150	5/7/2013	Not Listed	50	41.6	Box	Not Listed	Not Listed	Not Listed
Billet & Pre-Heat	3463	Y	New	Bloom	8x0.75	6	1,000-2,150	11/12/2017	Not Listed	50	35.43	Not Listed	63	6.68	Not Listed
Billet & Pre-Heat	3463	Y	New	Bloom	8x0.75	6	1,000-2,150	11/12/2017	Not Listed	50	36.49	Not Listed	66	4.64	22.79*
Billet & Pre-Heat	3463	Y	New	Bloom	8x0.75	6	1,000-2,150	11/12/2017	Not Listed	50	36.66	Not Listed	72	5.35	20.7*
Billet & Pre-Heat	3462	Y	Not Listed	Not Listed	Not Listed	15.6	2,300	3/23/2017	Not Listed	49	38.6	Not Listed	23	11	1.7
Billet & Pre-Heat	3463	Y	New	Bloom	8x0.75	6	1,000-2,150	11/12/2017	Not Listed	130 [^]	38.83	Not Listed	32	7.23	20.32*
Billet & Pre-Heat	3463	Y	New	Bloom	8x0.75	6	1,000-2,150	11/12/2017	Not Listed	50	44.14	Not Listed	54	8.28	20.2*
Billet & Pre-Heat	3462	Y	Not Listed	Not Listed	Not Listed	12	2,300	4/8/2014	Not Listed	51	44.2	Not Listed	41	6.82	254
Billet & Pre-Heat	3462	Y	Retrofit	Not Listed	Not Listed	16	2,300	12/3/2013	1,850	54	52.9	Not Listed	55	6.13	48.5
Billet & Pre-Heat	3463	N	Not Listed	Not Listed	Not Listed	6.4	900	8/8/2001	Not Listed	40	38.24	Not Listed	Not Listed	4.61	<10.99
Billet & Pre-Heat	3312	N	Retrofit	Eclipse: TJ100	4x1	4	1,700-2,150	8/17/2005	Not Listed	50	40.32	Not Listed	99	Not Listed	Not Listed
Billet & Pre-Heat	3312	N	Retrofit	Eclipse: TJ100	4x1	4	1,750-2,150	7/6/2005	Not Listed	50	41.39	Not Listed	Not Listed	Not Listed	Not Listed
Billet & Pre-Heat	3312	N	Retrofit	Eclipse: TJ100	4x1	4	1,750-2,150	8/3/2015	Not Listed	50	48.2	Not Listed	74	2.8	<396
Billet & Pre-Heat	3312	N	Retrofit	Eclipse: TJ100	4x1	4	1,750-2,150	8/3/2015	Not Listed	50	45.6	Not Listed	60	11.13	<733
Billet & Pre-Heat	3312	N	New	Eclipse: TJ150	4x1.45	5.8	1,400-2,150	5/8/2013	Not Listed	50	44.1	Box	Not Listed	Not Listed	Not Listed
Billet & Pre-Heat	3365	N	Not Listed	Not Listed	Not Listed	2.552	900	2/12/2013	1,610	60	39.65	Pusher	54	3.23	139.32
Billet & Pre-Heat	Not Listed	N	New	Eclipse: TFB23.075	6x0.55	3.3	950	11/8/2013	560	0.073 [†]	80	Not Listed	26	18.1	<5*
Billet & Pre-Heat	Not Listed	N	New	Eclipse: TFB23.075	6x0.55	3.3	950	11/8/2013	836	0.073 [†]	49.6	Not Listed	95	7-8	<5*
Forging & Drop Forge	3542	Y	Not Listed	Eclipse: TJ100	4x1	4	2,200	11/17/2017	Not Listed	50	38	Not Listed	48	9.6	42
Forging & Drop Forge	3463	Y	Not Listed	Hauk: Star	2x2	4	1,900-2,150	11/2/2001	Not Listed	50	45.43	Not Listed	Not Listed	Not Listed	68.84

* Not corrected to 3% O₂; [^] RECLAIM emission factor (lb/MMScf); [†] Emission Rate (lb/MMBTU)



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Source Tested Units > 30 ppm

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners (Number x Heat Rating: MMBtu/hr)	MMBTU/hr Input	Operating Temperature Range (°F)	Source Test Date	Actual Source Test Temperature (°F)	Permit Limit (ppm @ 3% O ₂)	Source Test Result (ppm @ 3% O ₂)	Furnace Type	Firing Capacity During Source Test (% of maximum)	Excess O ₂ During Source Test (%)	CO Concentration During Source Test (ppm @ 3% O ₂)
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: FN100	6x1	6	1,600-2,200	8/10/2018	Not Listed	50	30.38	Not Listed	88	6.17	7.76
Forging & Drop Forge									Not Listed		24.72		94	4.7	Not Listed
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: TJ100	6x1	6	1,600-2,200	7/9/2006	300	50	30.47	Not Listed	Not Listed	6.62	<25.08
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: TJ100	6x1	6	1,600-2,200	1/6/2013	1,400	50	32.1	Not Listed	93	6.53	<24.9
Forging & Drop Forge	3463	Y	Not Listed	Eclipse: TJ300	2x3	6	1,900-2,400	3/11/2006	400	50	33.39	Not Listed	Not Listed	1.71	<18.65
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: TJ100	6x1	6	1,600-2,200	6/24/2018	Not Listed	50	34.51	Not Listed	85	5.85	24.01*
Forging & Drop Forge	3462	Y	Not Listed	Hotwork: HV400	10x1.5	15	2,300	2/8/2012	>1,900	50	35.22	Not Listed	Not Listed	5.43	<46.29
Forging & Drop Forge	3463	Y	Not Listed	Maxon: Kinedizer-LE	2x2.6	5.2	1,900-2,400	8/18/2015	Not Searched	50	37.3	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3463	Y	Not Listed	Eclipse: TJ300	2x3	6	1,900-2,400	3/11/2006	Not Searched	50	37.43	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3463	Y	Not Listed	Eclipse: TJ300	2x3	6	1,200-2,200	4/22/2006	Not Searched	50	38.67	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	New	Eclipse: FN150	6x1.5	9	1,725-2,150	7/12/2013	Not Searched	50	38.7	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Not Listed	Hauck: SVG 125 B-001	6x1	6	1,600-2,200	2/20/2005	Not Searched	50	38.78	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3463	Y	Not Listed	Eclipse: TJ300	2x3	6	1,900-2,400	7/12/2008	Not Searched	50	38.93	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: FN150	2x1.5	3	1,600-2,200	8/13/2018	Not Searched	50	39.41	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Not Listed	Hauck: SVG 125	6x1	6	1,600-2,200	2/20/2005	Not Searched	50	40.05	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Retrofit	Hauck: SVG 125B	6x1	6	1,600-2,200	3/21/2009	Not Searched	50	41.28	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Retrofit	Hauck: SVG 125 B-001	6x1	6	1,600-2,200	3/21/2009	Not Searched	50	41.28	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: TJ100	6x1	6	1,600-2,200	12/30/2005	Not Searched	50	41.56	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Not Listed	Hauck: SVG 125 B-001	6x1	6	1,600-2,200	12/30/2005	Not Searched	50	43.16	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Not Listed	Hauck: SVG-126 B-001	6x1	6	1,600-2,200	2/8/2004	Not Searched	50	43.21	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Not Listed	Hauck: SVG-126 B-001	6x1	6	1,600-2,200	1/15/2017	Not Searched	50	43.22	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Retrofit	Hauck: SVG 125B	6x1	6	1,600-2,200	8/9/2018	Not Searched	50	43.46	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Not Listed	Hauck: SVG-126 B-001	6x1	6	1,600-2,200	8/9/2002	Not Searched	50	43.63	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Not Listed	Hauck: SVG-126 B-001	6x1	6	1,600-2,200	1/6/2013	Not Searched	50	43.8	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Not Listed	Not Listed	Not Searched	6	1,600-2,200	8/9/2002	Not Searched	50	43.95	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Retrofit	Hauck: SVG 125B	6x1	6	1,600-2,200	10/26/2018	Not Searched	50	44.69	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Not Listed	Hauck: SVG-126 B-001	6x1	6	1,600-2,200	9/23/2018	Not Searched	50	44.86	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3463	Y	Not Listed	Eclipse: TJ300	2x3	6	1,900-2,400	12/8/2014	Not Searched	50	44.9	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Retrofit	Hauck: SVG 125B	6x1	6	1,600-2,200	12/26/2003	Not Searched	50	45.12	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Retrofit	Hauck: SVG 125B	6x1	6	1,600-2,200	7/10/2002	Not Searched	50	45.32	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Not Listed	Hauck: SVG-126 B-001	6x1	6	1,600-2,200	4/14/2013	Not Searched	50	45.4	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3463	Y	Not Listed	Eclipse: TJ300	2x3	6	1,900-2,400	12/8/2014	Not Searched	50	45.5	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: FN100	3x1	3	1,600-2,200	11/4/2012	Not Searched	50	45.55	Not Listed	Not Searched	Not Searched	Not Searched
Forging & Drop Forge	3463	Y	Not Listed	Eclipse: TJ300	2x3	6	1,900-2,400	12/8/2014	1,600-1,900	50	45.7	Not Listed	Not Listed	3.7	<20.8
Forging & Drop Forge	3462	Y	Retrofit	Hotwork: HV300	8x1	8	2,300	1/22/2013	>1,800	65	46	Not Listed	55	4.77	<44.4
Forging & Drop Forge	3462	Y	Retrofit	Hauck: SVG 125B	6x1	6	1,600-2,200	8/15/2003	Not Listed	50	46.47	Not Listed	Not Listed	1.52	<18.47
Forging & Drop Forge	3462	Y	Retrofit	Hauck: SVG 125B	6x1	6	1,600-2,200	4/14/2013	>1,400	50	47.6	Not Listed	95	3.95	<106
Forging & Drop Forge	3462	Y	Retrofit	Hauck: SVG 125B	6x1	6	1,600-2,200	8/9/2018	Not Listed	50	47.6	Not Listed	94	5.52	9.92
Forging & Drop Forge	3462	Y	Not Listed	Not Listed	Not Listed	15	2,300	4/8/2014	Not Listed	55	47.8	Not Listed	13	<5	<220
Forging & Drop Forge	3462	Y	Retrofit	Hauck: SVG 125B	6x1	6	1,600-2,200	12/2/2018	Not Listed	50	47.81	Not Listed	105	5.13	0.54*
Forging & Drop Forge	3462	Y	Retrofit	Hauck: SVG 125B	6x1	6	1,600-2,200	9/9/2003	Not Listed	50	47.84	Not Listed	Not Listed	2.21	<19.16
Forging & Drop Forge	3462	Y	Retrofit	Hotwork: HV400	8x1.4	12	2,300	4/21/2018	Not Listed	55	48	Not Listed	44	7.24	<26.2
Forging & Drop Forge	3463	Y	Not Listed	Maxon: Kinedizer	2x3	6	1,900-2,400	5/29/2009	Not Listed	130^	48.17	Not Listed	Not Listed	5.5	<23.25
Forging & Drop Forge	3462	Y	Retrofit	Hauck: SVG 125B	6x1	6	1,600-2,200	6/23/2013	1,100-1,600	50	48.3	Not Listed	Not Listed	8.89	43.7
Forging & Drop Forge	3462	Y	Retrofit	North American: 4441-4 (Temest)	8x0.525	4.5	2,300	9/2/2014	>1,800	70.31	48.5	Not Listed	55	7.62	<135

* Not corrected to 3% O₂; ^ RECLAIM emission factor (lb/MMScf); † Emission Rate (lb/MMBtu)



Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces

Source Tested Units > 30 ppm

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners (Number x Heat Rating: MMBtu/hr)	MMBTU/hr Input	Operating Temperature Range (°F)	Source Test Date	Actual Source Test Temperature (°F)	Permit Limit (ppm @ 3% O2)	Source Test Result (ppm @ 3% O2)	Furnace Type	Firing Capacity During Source Test (% of maximum)	Excess O2 During Source Test (%)	CO Concentration During Source Test (ppm @ 3% O2)
Forging & Drop Forge	3462	Y	Retrofit	Hauck: SVG 125B	6x1	6	1,600-2,200	6/23/2013	1,800	50	48.6	Not Listed	Not Listed	4.14	<21.4
Forging & Drop Forge	3462	Y	Retrofit	Hauck: SVG 125B	6x1	6	1,600-2,200	2/4/2004	270	50	49.45	Not Listed	Not Listed	6.86	<50.98
Forging & Drop Forge	3462	Y	Retrofit	Hauck: SVG RSVG-125	4x1	4	1,600-2,200	8/12/2012	>1,200	60	49.6	Not Listed	99	5.2	<45.6
Forging & Drop Forge	3462	Y	Not Listed	Not Listed	Not Listed	16.4	2,300	Not Listed	Not Listed	65	54.8	Not Listed	38	<2	<192
Forging & Drop Forge	3462	Y	Not Listed	Not Listed	Not Listed	4.6	2,300	2/5/2013	>1,200	70	54.4	Not Listed	65	4.75	<111
Forging & Drop Forge	3462	Y	Not Listed	North American: 4825-6Z (Hot Air Burner)	7x1.005	7.035	2,300	1/22/2013	>1,800	108.44	84.7	Not Listed	46	5.25	<45.8
Forging & Drop Forge	3462	Y	New	Eclipse: FN150	6x1.5	9	1,725-2,150	7/12/2013	Not Listed	50	30.7	Not Listed	Not Listed	4.94	<22.4
Forging & Drop Forge	3462	Y	Not Listed	Eclipse: FN200	10x2	20	1,725-2,150	4/18/2015	Not Listed	26	32.4	Not Listed	8	5.69	<23.5
Forging & Drop Forge	3462	Y	Not Listed	Not Listed	Not Listed	12	1,725-2,150	2/21/2015	300	55	36.7	Not Listed	37	13	<22.6
Forging & Drop Forge	3462	Y	Not Listed	Not Listed	Not Listed	12	1,725-2,150	2/21/2015	1,600	55	36.7	Not Listed	41	11.8	<19.7
Forging & Drop Forge	3462	N	Not Listed	Eclipse: TJ100	6x1	6	1,600-2,400	9/21/2015	>1,200	50	37.56	Not Listed	92	3.79	1.28
Forging & Drop Forge	3462	N	Not Listed	North American: 4442 (Tempest)	6x1	6	1,600-2,400	12/3/2012	>2,000	60	44	Not Listed	75	1.39	<91.74
Forging & Drop Forge	3462	N	Not Listed	North American: 6425-7B (Duel-Fuel Burners)	2x2.25	4.5	1,600-2,400	1/26/2013	1,800	60	44.49	Not Listed	22	4.47	<43.58
Forging & Drop Forge	Not Listed	N	Not Listed	Bloom: 2300-056 (Large Capacity Burner)	10x0.5	5	1,050	1/28/2013	Not Listed	50	45.36	Not Listed	94	2.15	215
Forging & Drop Forge	3462	Y	Not Listed	Hauck: SVG-126 B-001	6x1	6	1,725-2,150	4/3/2015	1,800	55	46.3	Not Listed	92	<1	<17.9
Forging & Drop Forge	3312	N	Not Listed	Eclipse: TJ100	4x1	4	1,725-2,150	12/21/2007	Not Listed	60	48.2	Not Listed	Not Listed	Not Listed	Not Listed
Forging & Drop Forge	3462	N	Not Listed	North American: 6425-6 (Duel-Fuel Burners)	2x1.5	3	1,600-2,400	4/20/2013	1,700	60	48.81	Not Listed	47	11	<72.35
Forging & Drop Forge	3312	N	Retrofit	Eclipse: TJ100	4x1	4	2,000	5/18/2013	2,000	60	48.9	Not Listed	79	4.89	Not Listed
Forging & Drop Forge	3312	N	Not Listed	Eclipse: TJ100	4x1	4	1,750-2,150	7/10/2013	Not Listed	60	49.3	Not Listed	Not Listed	Not Listed	Not Listed
Forging & Drop Forge	3312	N	New	Maxon: Kinedizer LE	2x2.6	5.2	2,200	2/9/2018	1,800	50	49.3	Not Listed	44	5.89	<23.8
Forging & Drop Forge	3462	N	Not Listed	North American: 6425-6 (Duel-Fuel Burners)	2x1.5	3	1,600-2,400	4/20/2013	1,700	60	51.95	Not Listed	47	11	<72.35
Forging & Drop Forge	3462	N	Not Listed	North American: 6425-6 (Duel-Fuel Burners)	2x1.57	3.14	1,600-2,400	1/21/2003	1,900	60	53.06	Not Listed	55	2.36	<38.62
Forging & Drop Forge	3312	N	Not Listed	Eclipse: TJ100	4x1	4	1,750-2,150	8/3/2015	Not Listed	60	53.7	Not Listed	58	6.97	514
Forging & Drop Forge									Not Listed		41.2		85	3.25	Not Listed
Forging & Drop Forge	3462	N	Not Listed	North American: 4442 (Tempest)	6x1	6	1,600-2,400	12/28/2012	>1,200	60	53.71	Not Listed	71	0.31	35.14
Forging & Drop Forge	3462	Y	Not Listed	Hauck: SVG-126 B-001	6x1	6	1,725-2,150	Not Listed	Not Listed	55	54.66	Not Listed	79	<1	<20.1
Forging & Drop Forge	3462	Y	Not Listed	North American: 4825-7B (Hot Air Burner)	8x2.1	16.8	1,725-2,150	3/27/2015	Not Listed	65	69.5	Not Listed	39	14	<51.5
Forging & Drop Forge	3462	Y	Not Listed	Namco	Not Listed	20.3	1,725-2,150	3/31/2015	Not Listed	65	69.5	Not Listed	30	14	<51.5
Forging & Drop Forge	3462	Y	Not Listed	Not Listed	Not Listed	18	1,725-2,150	3/27/2015	1,750	65	87.2	Not Listed	42	16.2	76.3
Forging & Drop Forge	3462	N	Not Listed	Not Listed	2x	3.14	1,600-2,400	1/21/2013	1,800	60	49.96	Not Listed	31	3.17	<40.39
Other - Heating	3398	N	Not Listed	North American: 4823-5	8x0.675	5.4	1,210	11/24/2015	Not Listed	60	57.27	Tilt-up	44	7.61	2.3
Other - Heating	3462	Y	Not Listed	Hotwork: CT HV300	8x1	8	2,300	2/8/2012	Not Listed	50	35.17	Not Listed	Not Listed	0.94	8.97
Other - Heating	3462	Y	Not Listed	Eclipse: TJ150	4x1.5	6	2,200	10/28/2014	2,200	50	37.2	Not Listed	67	3.33	204
Other - Heating	3398	N	Not Listed	Eclipse: TJ025; TJ050	8x0.25; 7x0.5	5.5	Not Listed	11/23/2015	Not Listed	50	42.84	Not Listed	59	1.09	0.2

* Not corrected to 3% O2; ^ RECLAIM emission factor (lb/MMScf); † Emission Rate (lb/MMBtu)



Proposed Rule 1147.2 – NO_x Reductions from Metal Melting and Heating Furnaces Source Tested Units > 30 ppm

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners (Number x Heat Rating: MMBtu/hr)	MMBTU/hr Input	Operating Temperature Range (°F)	Source Test Date	Actual Source Test Temperature (°F)	Permit Limit (ppm @ 3% O ₂)	Source Test Result (ppm @ 3% O ₂)	Furnace Type	Firing Capacity During Source Test (% of maximum)	Excess O ₂ During Source Test (%)	CO Concentration During Source Test (ppm @ 3% O ₂)
Other - Heating	3398	N	Retrofit	Eclipse: TFB-075 (Radiant Tube)	24x0.35	8.4	900-1,020	4/18/2018	1,020	55	45.52	Not Listed	Not Listed	2.87	39.71
Other - Heating	3398	N	Not Listed	Eclipse: TJO25; TJO75	7x0.25; 8x0.75	7.75	900-2,280	1/20/2016	Not Listed	50	46.5	Not Listed	11	0.92	1.5
Other - Heating	3398	N	Retrofit	Eclipse: TFB-075 (Radiant Tube)	16x0.45	7.2	900-1,020	12/10/2012	Not Listed	55	46.77	Not Listed	Not Listed	3.29	20.33
Other - Heating	3398	N	Not Listed	Eclipse: TJO25; TJO50	8x0.25; 7x0.5	5.5	Not Listed	11/24/2015	Not Listed	50	48.88	Not Listed	Not Listed	Not Listed	Not Listed
Other - Heating	3398	N	Retrofit	Eclipse: TFB-075 (Radiant Tube)	16x0.45	7.2	900-1,020	10/22/2014	Not Listed	55	49.1	Not Listed	Not Listed	7.05	Not Listed
Other - Heating	3398	N	Retrofit	Eclipse: TFB21.075 (Radiant Tube)	10x0.305	3.05	900-1,020	10/29/2012	Not Listed	55	52.16	Not Listed	Not Listed	3.06	<20.07
Other - Heating	3398	N	Retrofit	Eclipse: TFB-075 (Radiant Tube)	16x0.45	7.2	900-1,020	10/26/2012	Not Listed	55	53.76	Not Listed	Not Listed	3.82	<20.96
Other - Heating	3398	N	Retrofit	Eclipse: TFB-075 (Radiant Tube)	24x0.325	7.8	900-1,020	10/25/2012	Not Listed	60	58.56	Not Listed	Not Listed	4.2	21.03
Homogenizing	3341	Y	Not Listed	Hauck: MBG	4x4	16	843	4/22/2015	560	45	34.5	Not Listed	47	3.83	928
Homogenizing	3341	Y	Not Listed	North American: 4575-8B (HIRAM)	2x7	14	Not Listed	2/12/2015	980	45	38.87	Not Listed	71	9.1	486
Homogenizing	3341	Y	Not Listed	Bloom: 1500-80D-L; 1500-04AS	1x6; 1x6	12	843	2/12/2016	840	45	39.67	Not Listed	76	3.19	177.6
Homogenizing	3341	Y	Not Listed	North American: 4575-8B (HIRAM)	2x6.576	13.152	1,221	10/7/2014	740	45	36.2	Not Listed	Not Listed	7.4	1,058
Homogenizing	3341	N	Not Listed	Eclipse: WX400; WX100	2x4; 2x1	10	1,060	1/28/2008	Not Listed	38	37.3	Not Listed	60	8.26	4.34
											20.5	Not Listed	12	16.65	1.35
Re-Heat	3312	Y	Not Listed	Not Listed	Not Listed	533.00	2,300	Not Listed	Not Listed	60	53.89	Not Listed	Not Listed	Not Listed	Not Listed
Crucible & Pit	3366	N	Not Listed	Not Listed	Not Listed	2.05	1,950	11/10/2010	Not Listed	60	34	Not Listed	Not Listed	Not Listed	Not Listed
Crucible & Pit	3366	N	Not Listed	Not Listed	Not Listed	2.05	1,221-1,720	11/10/2010	Not Listed	60	42	Not Listed	Not Listed	Not Listed	Not Listed
Crucible & Pit	3369	N	Not Listed	Not Listed	Not Listed	2.75	787	7/27/2012	Not Listed	60	48.66	Not Listed	Not Listed	Not Listed	Not Listed
Crucible & Pit	3369	Y	Not Listed	Eclipse	1x2.5	2.50	1,221	2/19/1900	1,100	60	50.73	Not Listed	78	11.06	25.8
Crucible & Pit	3369	Y	Not Listed	Eclipse: RAO200 (RatioAir)	Not Listed	2.50	1,221	4/26/2018	900	75	53.46	Not Listed	87	10.52	7.68
Crucible & Pit	3317	N	Not Listed	Riello: 40 G400	1x0.4	0.40	787	6/20/2018	620	60	47.8	Not Listed	Not Listed	13	53
Crucible & Pit	3317	N	Not Listed	Riello: 40 G400	1x0.4	0.40	787	6/20/2018	780	60	50.3	Not Listed	Not Listed	<5	<22.6
Other- Melting	3341	Y	Not Listed	Bloom: 1150-100 (LumiFlame Regenerative)	Not Listed	16.00	1,221	12/4/2014	440	60	31.6	Not Listed	95	10.3	70.2
Holding	3341	Y	Not Listed	North American: 4575-9 (HIRAM)	Not Listed	6.00	2,000	8/28/2002	Not Listed	45	39.6	Not Listed	81	0.9	<1.0
Holding	3369	N	Not Listed	Not Listed	Not Listed	0.58	725-787.2	5/13/2015	Not Listed	60	46.42	Not Listed	Not Listed	Not Listed	Not Listed
Holding	3369	N	Not Listed	Not Listed	Not Listed	0.58	725-787.2	5/13/2015	Not Listed	60	47.2	Not Listed	Not Listed	Not Listed	Not Listed
Holding	3369	N	Not Listed	Not Listed	Not Listed	0.58	725-787.2	5/13/2015	Not Listed	60	59.42	Not Listed	Not Listed	Not Listed	Not Listed
Holding	3369	N	Not Listed	Not Listed	Not Listed	0.30	787	7/27/2012	Not Listed	60	45.74	Kettle Type	Not Listed	Not Listed	Not Listed
Kettle & Pot	3317	N	Not Listed	Not Listed	85235; 2x0.614	4.64	787	3/8/2016	1,230	60	36.43	Not Listed	67	8.56	141.02
Kettle & Pot	3369	N	Not Listed	Not Listed	Not Listed	0.96	725-787.2	5/13/2015	Not Listed	60	51.18	Not Listed	Not Listed	Not Listed	Not Listed
Kettle & Pot	3728	N	Not Listed	Eclipse: TJO25	4x0.25	1	621.5	9/8/2017	Not Listed	60	52.7	Not Listed	21	20.8	923.5
Kettle & Pot	3728	N	Not Listed	Eclipse: TJO25	4x0.25	1	621.5	9/8/2017	Not Listed	60	51	Not Listed	98	20.6	72.5
Kettle & Pot	3728	N	Not Listed	Eclipse: TJO25	4x0.25	1	621.5	9/8/2017	Not Listed	60	38	Not Listed	93	20.5	157
Kettle & Pot	3728	N	Not Listed	Eclipse: TJO25	4x0.25	1	621.5	9/8/2017	Not Listed	60	20.4	Not Listed	30	20.6	123.8



Proposed Rule 1147.2 – NO_x Reductions from Metal Melting and Heating Furnaces Source Tested Units > 30 ppm

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners (Number x Heat Rating: MMBtu/hr)	MMBTU/hr Input	Operating Temperature Range (°F)	Source Test Date	Actual Source Test Temperature (°F)	Permit Limit (ppm @ 3% O ₂)	Source Test Result (ppm @ 3% O ₂)	Furnace Type	Firing Capacity During Source Test (% of maximum)	Excess O ₂ During Source Test (%)	CO Concentration During Source Test (ppm @ 3% O ₂)
Kettle & Pot	3339	N	Not Listed	Maxon: KZDR LE 030 NFP	1x2.4	2.40	Not Listed	12/12/2016	Not Listed	60	48.1	Not Listed	42	12.4	12.4
Kettle & Pot	3339	N	Not Listed	Maxon: KZDR LE 030 NFP	1x2.4	2.40	787-1,221	12/12/2016	Not Listed	60	48.5	Not Listed	96	12.7	15.3
Kettle & Pot	3339	N	Not Listed	Maxon: KZDR LE 030 NFP	1x2.4	2.40	787-1,221	4/22/2014	1,030	60	53	Not Listed	85	11.3	<37.4
Reverberatory	3341	Y	Not Listed	North American: 4821 12-R (Hot Air Magna-Flame)	2x10	12.00	1,221	9/27/2001	1,600	45	32	Not Listed	74	10.18	58.3
Reverberatory	Not Listed	Y	Retrofit	Stordy: FM2 Micronox	2x12.283	24.57	1,007	6/4/2018	1,470	38	32.96	Not Listed	68	2.41	19.97
Reverberatory	3341	Y	Not Listed	Stordy: 3600	2x9	18.00	1,200	4/23/2015	Not Listed	38	33	Not Listed	93	<5	<467
Reverberatory	3341	Y	Retrofit	North American: 3600	2x8	16.00	1,221	6/19/2015	630	38	33	Not Listed	85	<2	72
Reverberatory	Not Listed	Y	New	Stordy: FM2 Micronox	Not Listed	24.00	1,221	4/28/2017	Not Listed	38	33.9	Not Listed	85	<5	2,353
Reverberatory	3341	Y	Not Listed	North American: 6316Q-10 (Regenerative)	2x17	34	1,221	7/26/2011	140 1,900	65	34.4 26.7	Not Listed	48 47	10.5 1.62	172 153
Reverberatory	3354	Y	Retrofit	North American: 4343-12-B (TwinBed II Regenerative)	Not Listed	25.00	1,221	6/26/2006	Not Listed	40	34.9	Not Listed	Not Listed	Not Listed	Not Listed
Reverberatory	3341	Y	Retrofit	Stordy: 3600C	2x12.283	24.57	1,221	5/11/2018	1,000	38	35.02	Not Listed	61	4	27.13
Reverberatory	3341	Y	New	BOC Gases: Flat Jet TM	2x5	10	Not Listed	6/5/2018	280 230	60	36.6 19.7	Not Listed	31 96	19.7 18	Not Listed Not Listed
Reverberatory	3341	N	Not Listed	Bloom: 1150-100 (LumiFlame Regenerative)	2x6.3	12.60	1,221	1/29/2008	900	38	36.7	Not Listed	109	17.17	307
Reverberatory	3369	N	Not Listed	Not Listed	Not Listed	4.15	787.2	7/27/2012	Not Listed Not Listed	60	40.47 28.5	Not Listed	Not Listed Not Listed	5.74 5.74	0 0
Reverberatory	3341	Y	New	North American: 4575-12	2x7	14.00	1,221	7/27/2011	700	55	41.7	Not Listed	48	6.92	279
Reverberatory	Not Listed	Y	Not Listed	BOC: Flat Jet	2x8	16	Not Listed	5/10/2018	300 200	60	42.3 26.4*	Not Listed	24 98	19.8 19.5	Not Listed Not Listed
Reverberatory	3369	N	Not Listed	Not Listed	Not Listed	4.15	787	7/27/2012	Not Listed	60	43.64	Not Listed	Not Listed	Not Listed	Not Listed
Reverberatory	3341	Y	Not Listed	Bloom: 1150-100 (LumiFlame Regenerative)	Not Listed	16.00	1,600-2,000	4/21/2015	1,000	60	45.2	Not Listed	39	12.5	<426
Reverberatory	3365	N	Not Listed	Eclipse: TJ150	4x1.5	6.00	1,221	9/6/2012	270	60	48.35	Not Listed	Not Listed	1.94	<37.76
Reverberatory	3365	N	Not Listed	Eclipse: TJ150	4x1.5	6.00	1,221	9/6/2012	270	60	45.89	Not Listed	Not Listed	2.42	<38.75
Reverberatory	3354	Y	Retrofit	Bloom: 1150-100 (LumiFlame Regenerative)	2x15	30.00	1,221	12/13/2012	1,300-2,000	50	46.2	Not Listed	39	19.26	168
Reverberatory	3714	Y	Not Listed	North American: 4832A-7	8x2	16.00	1,221	8/26/2014	790	50	46.2	Not Listed	99	16.8	58.7
Reverberatory	3714	Y	New	North American: 4575-10 HIRAM	2x5	10.00	799	8/26/2014	830	60	47.7	Not Listed	84	15	33
Reverberatory	3365	N	Not Listed	Eclipse: TJ150	4x1.5	6.00	1,221	9/6/2012	270	60	45.8	Not Listed	Not Listed	1.63	<37.16
Reverberatory	3714	Y	Not Listed	North American: 4832 (Flat Flame)	Not Listed	12.00	1,221	8/26/2014	940	60	50.6	Not Listed	82	15.6	45.5
Reverberatory	3341	Y	Not Listed	North American: 6316Q-10 (Regenerative)	Not Listed	34	1,221	8/23/2011	1,900 200	65	47.7 59	Not Listed	52 53	0.87 4.85	334 1,913
Rotary	Not Listed	N	Retrofit	Maxon: KZDR LE 030 NFS	Not Listed	5.00	1,650-1,720	10/12/2017	1,950	60	48.66	Not Listed	79	5.08	<45.26

* Not corrected to 3% O₂; ^ RECLAIM emission factor (lb/MMScf); † Emission Rate (lb/MMBtu)



Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces

Additional Source Tested Units > 30 ppm

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners (Number x Heat Rating: MMBtu/hr)	MMBTU/hr Input	Operating Temperature Range (°F)	Source Test Date	Actual Source Test Temperature (°F)	Permit Limit (ppm @ 3% O2)	Source Test Result (ppm @ 3% O2)	Furnace Type	Firing Capacity During Source Test (% of maximum)	Excess O2 During Source Test (%)	CO Concentration During Source Test (ppm @ 3% O2)
Forging & Drop Forge	Not Listed	N	Not Listed	Bloom: 2300-056 (Large Capacity Burner)	10x0.5	5	1,050	1/28/2013	Not Listed	50	45.36	Not Listed	94	2.15	215
Forging & Drop Forge	3462	Y	Not Listed	Hauck: SVG-126 B-001	6x1	6	1,725-2,150	4/3/2015	1,800	55	46.3	Not Listed	92	<1	<17.9
Forging & Drop Forge	3312	N	Not Listed	Eclipse: TJ100	4x1	4	1,725-2,150	12/21/2007	Not Listed	60	48.2	Not Listed	Not Listed	Not Listed	Not Listed
Forging & Drop Forge	3462	N	Not Listed	North American: 6425-6 (Duel-Fuel Burners)	2x1.5	3	1,600-2,400	4/20/2013	1,700	60	48.81	Not Listed	47	11	<72.35
Forging & Drop Forge	3312	N	Retrofit	Eclipse: TJ100	4x1	4	2,000	5/18/2013	2,000	60	48.9	Not Listed	79	4.89	Not Listed
Forging & Drop Forge	3312	N	Not Listed	Eclipse: TJ100	4x1	4	1,750-2,150	7/10/2013	Not Listed	60	49.3	Not Listed	Not Listed	Not Listed	Not Listed
Forging & Drop Forge	3312	N	New	Maxon: Kinedizer LE	2x2.6	5.2	2,200	2/9/2018	1,800	50	49.3	Not Listed	44	5.89	<23.8
Forging & Drop Forge	3462	N	Not Listed	North American: 6425-6 (Duel-Fuel Burners)	2x1.5	3	1,600-2,400	4/20/2013	1,700	60	51.95	Not Listed	47	11	<72.35
Forging & Drop Forge	3462	N	Not Listed	North American: 6425-6 (Duel-Fuel Burners)	2x1.57	3.14	1,600-2,400	1/21/2003	1,900	60	53.06	Not Listed	55	2.36	<38.62
Forging & Drop Forge	3312	N	Not Listed	Eclipse: TJ100	4x1	4	1,750-2,150	8/3/2015	Not Listed	60	53.7	Not Listed	58	6.97	514
Forging & Drop Forge									Not Listed		41.2		85	3.25	Not Listed
Forging & Drop Forge	3462	N	Not Listed	North American: 4442 (Tempest)	6x1	6	1,600-2,400	12/28/2012	>1,200	60	53.71	Not Listed	71	0.31	35.14
Forging & Drop Forge	3462	Y	Not Listed	Hauck: SVG-126 B-001	6x1	6	1,725-2,150	Not Listed	Not Listed	55	54.66	Not Listed	79	<1	<20.1
Forging & Drop Forge	3462	Y	Not Listed	North American: 4825-7B (Hot Air Burner)	8x2.1	16.8	1,725-2,150	3/27/2015	Not Listed	65	69.5	Not Listed	39	14	<51.5
Forging & Drop Forge	3462	Y	Not Listed	Namco	Not Listed	20.3	1,725-2,150	3/31/2015	Not Listed	65	69.5	Not Listed	30	14	<51.5
Forging & Drop Forge	3462	Y	Not Listed	Not Listed	Not Listed	18	1,725-2,150	3/27/2015	1,750	65	87.2	Not Listed	42	16.2	76.3
Forging & Drop Forge	3462	N	Not Listed	Not Listed	2x	3.14	1,600-2,400	1/21/2013	1,800	60	49.96	Not Listed	31	3.17	<40.39
Other - Heating	3398	N	Not Listed	North American: 4823-5	8x0.675	5.4	1,210	11/24/2015	Not Listed	60	57.27	Tilt-up	44	7.61	2.3
Other - Heating	3462	Y	Not Listed	Hotwork: CT HV300	8x1	8	2,300	2/8/2012	Not Listed	50	35.17	Not Listed	Not Listed	0.94	8.97
Other - Heating	3462	Y	Not Listed	Eclipse: TJ150	4x1.5	6	2,200	10/28/2014	2,200	50	37.2	Not Listed	67	3.33	204
Other - Heating	3398	N	Not Listed	Eclipse: TJ025; TJ050	8x0.25; 7x0.5	5.5	Not Listed	11/23/2015	Not Listed	50	42.84	Not Listed	59	1.09	0.2
Other - Heating	3398	N	Retrofit	Eclipse: TFB-075 (Radiant Tube)	24x0.35	8.4	900-1,020	4/18/2018	1,020	55	45.52	Not Listed	Not Listed	2.87	39.71
Other - Heating	3398	N	Not Listed	Eclipse: TJ025; TJ075	7x0.25; 8x0.75	7.75	900-2,280	1/20/2016	Not Listed	50	46.5	Not Listed	11	0.92	1.5
Other - Heating	3398	N	Retrofit	Eclipse: TFB-075 (Radiant Tube)	16x0.45	7.2	900-1,020	12/10/2012	Not Listed	55	46.77	Not Listed	Not Listed	3.29	20.33
Other - Heating	3398	N	Not Listed	Eclipse: TJ025; TJ050	8x0.25; 7x0.5	5.5	Not Listed	11/24/2015	Not Listed	50	48.88	Not Listed	Not Listed	Not Listed	Not Listed
Other - Heating	3398	N	Retrofit	Eclipse: TFB-075 (Radiant Tube)	16x0.45	7.2	900-1,020	10/22/2014	Not Listed	55	49.1	Not Listed	Not Listed	7.05	Not Listed
Other - Heating	3398	N	Retrofit	Eclipse: TFB21.075 (Radiant Tube)	10x0.305	3.05	900-1,020	10/29/2012	Not Listed	55	52.16	Not Listed	Not Listed	3.06	<20.07
Other - Heating	3398	N	Retrofit	Eclipse: TFB-075 (Radiant Tube)	16x0.45	7.2	900-1,020	10/26/2012	Not Listed	55	53.76	Not Listed	Not Listed	3.82	<20.96
Other - Heating	3398	N	Retrofit	Eclipse: TFB-075 (Radiant Tube)	24x0.325	7.8	900-1,020	10/25/2012	Not Listed	60	58.56	Not Listed	Not Listed	4.2	21.03
Homogenizing	3341	Y	Not Listed	Hauck: MBG	4x4	16	843	4/22/2015	560	45	34.5	Not Listed	47	3.83	928
Homogenizing	3341	Y	Not Listed	North American: 4575-8B (HIRAM)	2x7	14	Not Listed	2/12/2015	980	45	38.87	Not Listed	71	9.1	486

* Not corrected to 3% O2; ^ RECLAIM emission factor (lb/MMScf); † Emission Rate (lb/MMBtu)



Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces

Additional Source Tested Units > 30 ppm

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners (Number x Heat Rating: MMBtu/hr)	MMBTU/hr Input	Operating Temperature Range (°F)	Source Test Date	Actual Source Test Temperature (°F)	Permit Limit (ppm @ 3% O2)	Source Test Result (ppm @ 3% O2)	Furnace Type	Firing Capacity During Source Test (% of maximum)	Excess O2 During Source Test (%)	CO Concentration During Source Test (ppm @ 3% O2)
Homogenizing	3341	Y	Not Listed	Bloom: 1500-80D-L; 1500-04AS	1x6; 1x6	12	843	2/12/2016	840	45	39.67	Not Listed	76	3.19	177.6
Homogenizing	3341	Y	Not Listed	North American: 4575-8B (HIRAM)	2x6.576	13.152	1,221	10/7/2014	740	45	36.2	Not Listed	Not Listed	7.4	1,058
Homogenizing	3341	N	Not Listed	Eclipse: WX400; WX100	2x4; 2x1	10	1,060	1/28/2008	Not Listed	38	37.3	Not Listed	60	8.26	4.34
Re-Heat	3312	Y	Not Listed	Not Listed	Not Listed	533.00	2,300	Not Listed	Not Listed	60	53.89	Not Listed	Not Listed	Not Listed	Not Listed
Crucible & Pit	3366	N	Not Listed	Not Listed	Not Listed	2.05	1,950	11/10/2010	Not Listed	60	34	Not Listed	Not Listed	Not Listed	Not Listed
Crucible & Pit	3366	N	Not Listed	Not Listed	Not Listed	2.05	1,221-1,720	11/10/2010	Not Listed	60	42	Not Listed	Not Listed	Not Listed	Not Listed
Crucible & Pit	3369	N	Not Listed	Not Listed	Not Listed	2.75	787	7/27/2012	Not Listed	60	48.66	Not Listed	Not Listed	Not Listed	Not Listed
Crucible & Pit	3369	Y	Not Listed	Eclipse	1x2.5	2.50	1,221	2/19/1900	1,100	60	50.73	Not Listed	78	11.06	25.8
Crucible & Pit	3369	Y	Not Listed	Eclipse: RA0200 (RatioAir)	Not Listed	2.50	1,221	4/26/2018	900	75	53.46	Not Listed	87	10.52	7.68
Crucible & Pit	3317	N	Not Listed	Riello: 40 G400	1x0.4	0.40	787	6/20/2018	620	60	47.8	Not Listed	Not Listed	13	53
Crucible & Pit	3317	N	Not Listed	Riello: 40 G400	1x0.4	0.40	787	6/20/2018	780	60	50.3	Not Listed	Not Listed	<5	<22.6
Other- Melting	3341	Y	Not Listed	Bloom: 1150-100 (LumiFlame Regenerative)	Not Listed	16.00	1,221	12/4/2014	440	60	31.6	Not Listed	95	10.3	70.2
Holding	3341	Y	Not Listed	North American: 4575-9 (HIRAM)	Not Listed	6.00	2,000	8/28/2002	Not Listed	45	39.6	Not Listed	81	0.9	<1.0
Holding	3369	N	Not Listed	Not Listed	Not Listed	0.58	725-787.2	5/13/2015	Not Listed	60	46.42	Not Listed	Not Listed	Not Listed	Not Listed
Holding	3369	N	Not Listed	Not Listed	Not Listed	0.58	725-787.2	5/13/2015	Not Listed	60	47.2	Not Listed	Not Listed	Not Listed	Not Listed
Holding	3369	N	Not Listed	Not Listed	Not Listed	0.58	725-787.2	5/13/2015	Not Listed	60	59.42	Not Listed	Not Listed	Not Listed	Not Listed
Holding	3369	N	Not Listed	Not Listed	Not Listed	0.30	787	7/27/2012	Not Listed	60	45.74	Kettle Type	Not Listed	Not Listed	Not Listed
Kettle & Pot	3317	N	Not Listed	Not Listed	85235; 2x0.614	4.64	787	3/8/2016	1,230	60	36.43	Not Listed	67	8.56	141.02
Kettle & Pot	3369	N	Not Listed	Not Listed	Not Listed	0.96	725-787.2	5/13/2015	Not Listed	60	51.18	Not Listed	Not Listed	Not Listed	Not Listed
Kettle & Pot	3728	N	Not Listed	Eclipse: TJ025	4x0.25	1	621.5	9/8/2017	Not Listed	60	52.7	Not Listed	21	20.8	923.5
Kettle & Pot	3728	N	Not Listed	Eclipse: TJ025	4x0.25	1	621.5	9/8/2017	Not Listed	60	51	Not Listed	98	20.6	72.5
Kettle & Pot	3728	N	Not Listed	Eclipse: TJ025	4x0.25	1	621.5	9/8/2017	Not Listed	60	38	Not Listed	93	20.5	157
Kettle & Pot	3728	N	Not Listed	Eclipse: TJ025	4x0.25	1	621.5	9/8/2017	Not Listed	60	20.4	Not Listed	30	20.6	123.8
Kettle & Pot	3339	N	Not Listed	Maxon: KZDR LE 030 NFP	1x2.4	2.40	Not Listed	12/12/2016	Not Listed	60	48.1	Not Listed	42	12.4	12.4
Kettle & Pot	3339	N	Not Listed	Maxon: KZDR LE 030 NFP	1x2.4	2.40	787-1,221	12/12/2016	Not Listed	60	48.5	Not Listed	96	12.7	15.3
Kettle & Pot	3339	N	Not Listed	Maxon: KZDR LE 030 NFP	1x2.4	2.40	787-1,221	4/22/2014	1,030	60	53	Not Listed	85	11.3	<37.4
Reverberatory	3341	Y	Not Listed	North American: 4821 12-R (Hot Air Magna-Flame)	2x10	12.00	1,221	9/27/2001	1,600	45	32	Not Listed	74	10.18	58.3
Reverberatory	Not Listed	Y	Retrofit	Stordy: FM2 Micronox	2x12.283	24.57	1,007	6/4/2018	1,470	38	32.96	Not Listed	68	2.41	19.97
Reverberatory	3341	Y	Not Listed	Stordy: 3600	2x9	18.00	1,200	4/23/2015	Not Listed	38	33	Not Listed	93	<5	<467
Reverberatory	3341	Y	Retrofit	North American: 3600	2x8	16.00	1,221	6/19/2015	630	38	33	Not Listed	85	<2	72
Reverberatory	Not Listed	Y	New	Stordy: FM2 Micronox	Not Listed	24.00	1,221	4/28/2017	Not Listed	38	33.9	Not Listed	85	<5	2,353
Reverberatory	3341	Y	Not Listed	North American: 6316Q-10 (Regenerative)	2x17	34	1,221	7/26/2011	140	65	34.4	Not Listed	48	10.5	172
Reverberatory	3341	Y	Not Listed	North American: 6316Q-10 (Regenerative)	2x17	34	1,221	7/26/2011	1,900	65	26.7	Not Listed	47	1.62	153
Reverberatory	3354	Y	Retrofit	North American: 4343-12-B (TwinBed II Regenerative)	Not Listed	25.00	1,221	6/26/2006	Not Listed	40	34.9	Not Listed	Not Listed	Not Listed	Not Listed
Reverberatory	3341	Y	Retrofit	Stordy: 3600C	2x12.283	24.57	1,221	5/11/2018	1,000	38	35.02	Not Listed	61	4	27.13



Proposed Rule 1147.2 – NO_x Reductions from Metal Melting and Heating Furnaces

Additional Source Tested Units > 30 ppm

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners (Number x Heat Rating: MMBtu/hr)	MMBTU/hr Input	Operating Temperature Range (°F)	Source Test Date	Actual Source Test Temperature (°F)	Permit Limit (ppm @ 3% O ₂)	Source Test Result (ppm @ 3% O ₂)	Furnace Type	Firing Capacity During Source Test (% of maximum)	Excess O ₂ During Source Test (%)	CO Concentration During Source Test (ppm @ 3% O ₂)
Reverberatory	3341	Y	New	BOC Gases: Flat Jet TM	2x5	10	Not Listed	6/5/2018	280	60	36.6	Not Listed	31	19.7	Not Listed
									230		19.7		96	18	Not Listed
Reverberatory	3341	N	Not Listed	Bloom: 1150-100 (LumiFlame Regenerative)	2x6.3	12.60	1,221	1/29/2008	900	38	36.7	Not Listed	109	17.17	307
Reverberatory	3369	N	Not Listed	Not Listed	Not Listed	4.15	787.2	7/27/2012	Not Listed	60	40.47	Not Listed	Not Listed	5.74	0
									Not Listed		28.5		Not Listed	5.74	0
Reverberatory	3341	Y	New	North American: 4575-12	2x7	14.00	1,221	7/27/2011	700	55	41.7	Not Listed	48	6.92	279
Reverberatory	Not Listed	Y	Not Listed	BOC: Flat Jet	2x8	16	Not Listed	5/10/2018	300	60	42.3	Not Listed	24	19.8	Not Listed
									200		26.4*		98	19.5	Not Listed
Reverberatory	3369	N	Not Listed	Not Listed	Not Listed	4.15	787	7/27/2012	Not Listed	60	43.64	Not Listed	Not Listed	Not Listed	Not Listed
Reverberatory	3341	Y	Not Listed	Bloom: 1150-100 (LumiFlame Regenerative)	Not Listed	16.00	1,600-2,000	4/21/2015	1,000	60	45.2	Not Listed	39	12.5	<426
Reverberatory	3365	N	Not Listed	Eclipse: TJ150	4x1.5	6.00	1,221	9/6/2012	270	60	48.35	Not Listed	Not Listed	1.94	<37.76
Reverberatory	3365	N	Not Listed	Eclipse: TJ150	4x1.5	6.00	1,221	9/6/2012	270	60	45.89	Not Listed	Not Listed	2.42	<38.75
Reverberatory	3354	Y	Retrofit	Bloom: 1150-100 (LumiFlame Regenerative)	2x15	30.00	1,221	12/13/2012	1,300-2,000	50	46.2	Not Listed	39	19.26	168
Reverberatory	3714	Y	Not Listed	North American: 4832A-7	8x2	16.00	1,221	8/26/2014	790	50	46.2	Not Listed	99	16.8	58.7
Reverberatory	3714	Y	New	North American: 4575-10 HIRAM	2x5	10.00	799	8/26/2014	830	60	47.7	Not Listed	84	15	33
Reverberatory	3365	N	Not Listed	Eclipse: TJ150	4x1.5	6.00	1,221	9/6/2012	270	60	45.8	Not Listed	Not Listed	1.63	<37.16
Reverberatory	3714	Y	Not Listed	North American: 4832 (Flat Flame)	Not Listed	12.00	1,221	8/26/2014	940	60	50.6	Not Listed	82	15.6	45.5
Reverberatory	3341	Y	Not Listed	North American: 6316Q-10 (Regenerative)	Not Listed	34	1,221	8/23/2011	1,900	65	47.7	Not Listed	52	0.87	334
									200		59		53	4.85	1,913
Rotary	Not Listed	N	Retrofit	Maxon: KZDR LE 030 NFS	Not Listed	5.00	1,650-1,720	10/12/2017	1,950	60	48.66	Not Listed	79	5.08	<45.26

* Not corrected to 3% O₂; ^ RECLAIM emission factor (lb/MMScf); † Emission Rate (lb/MMBtu)



No Change

Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces Units with No Source Test

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners	MMBTU/hr Input	Operating Temperature Range (°F)	Permit Limit (ppm @ 3% O2)	Furnace Type
Aging	3354	Y	Not Searched	North American, Model: Zephyr (4988-2500)	Not Searched	2.50	400	130^	Not Listed
Aging	3354	Y	Not Searched	North American, Model 4988-4000	Not Searched	4.00	400	130^	Not Listed
Aging	3354	Y	Not Searched	North American, Model 4988-4000	Not Searched	4.00	400	130^	Not Listed
Aging	3354	Y	Not Searched	North American, Model 4988-4000	Not Searched	4.00	400	130^	Not Listed
Aging		N	Not Searched	Not Listed	Not Searched	5.00	400	60	Not Listed
Aging	3341	Y	Not Searched	Maxon, Model: 425	Not Searched	2.50	Not Listed	130^	Not Listed
Aging	3341	Y	Not Searched	Not Listed	Not Searched	2.50	Not Listed	130^	Not Listed
Aging	3341	Y	Not Searched	Eclipse, Model: 300 MG-G Mark 4	Not Searched	3.00	Not Listed	130^	Not Listed
Aging	3341	Y	Not Searched	North American, Model: 4545-8A	Not Searched	4.00	Not Listed	130^	Not Listed
Aging	3341	Y	Not Searched	Maxon, Model: 0.8M Packaged Cyclomax	Not Searched	5.10	Not Listed	30	Not Listed
Annealing	3315	Y	Not Searched	Not Listed	Not Searched	12.00	Not Listed	75	Not Listed
Annealing	3312	Y	Not Searched	Bloom Engineering, Model: 1500	Not Searched	5.60	1,100-1,300	40	Not Listed
Annealing	3312	Y	Not Searched	Bloom Engineering, Model: 1500	Not Searched	5.60	1,100-1,300	40	Not Listed
Annealing	3312	Y	Not Searched	Bloom Engineering, Model: 1500	Not Searched	5.60	1,100-1,300	40	Not Listed
Annealing	3312	Y	Not Searched	Bloom Engineering, Model: 1500	Not Searched	5.60	1,100-1,300	40	Not Listed
Annealing	3312	Y	Not Searched	Bloom Engineering, Model: 1500	Not Searched	5.60	1,100-1,300	40	Not Listed
Annealing	3312	Y	Not Searched	Bloom Engineering, Model: 1500	Not Searched	5.60	1,100-1,300	40	Not Listed
Annealing	3312	Y	Not Searched	Bloom Engineering, Model: 1500	Not Searched	5.60	1,100-1,300	40	Not Listed
Annealing	3312	Y	Not Searched	Bloom Engineering, Model: 1500	Not Searched	5.60	1,100-1,300	40	Not Listed

* Not corrected to 3% O2; ^ RECLAIM emission factor (lb/MMScf); † Emission rate (lb/MMBtu)



No Change

Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces Units with No Source Test

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners	MMBTU/hr Input	Operating Temperature Range (°F)	Permit Limit (ppm @ 3% O2)	Furnace Type
Annealing	3312	Y	Not Searched	Bloom Engineering, Model: 1500	Not Searched	5.60	1,100-1,300	40	Not Listed
Annealing	3312	Y	Not Searched	Bloom Engineering, Model: 1500	Not Searched	5.60	1,100-1,300	40	Not Listed
Annealing	3312	Y	Not Searched	Bloom Engineering, Model: 1500	Not Searched	5.60	1,100-1,300	40	Not Listed
Annealing	3312	Y	Not Searched	Not Listed	Not Searched	11.00	1,100-1,300	55	Not Listed
Annealing	3312	Y	Not Searched	Not Listed	Not Searched	11.00	1,100-1,300	55	Not Listed
Annealing	3312	Y	Not Searched	Radiant Tube	Not Searched	44.40	1,100-1,300	50	Not Listed
Annealing	Not Listed	N	Not Searched	Eclipse, Model: TJ 0200	Not Searched	10.00	1,150-1,650	60	Clamshell
Annealing	Not Listed	N	Not Searched	Eclipse, Model: 84MVTA	Not Searched	3.60	1,400-1,900	60	Not Listed
Annealing	Not Listed	N	Not Searched	Not Listed	Not Searched	4.00	1,750-2,100	60	Car Bottom
Annealing	Not Listed	N	Not Searched	Hotwork, Model: HV-400	Not Searched	4.00	1,950-2,100	60	Pit
Annealing	Not Listed	N	Not Searched	Hotwork, Model: HV-400	Not Searched	4.00	1,950-2,100	60	Pit
Billet & Pre-Heat	Not Listed	N	Not Searched	Not Listed	Not Searched	13.00	900	50	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Maxon, Model: 0.5M Kinedizer	6	3.00	900	30	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Maxon, Model: 0.5M Kinedizer	8	4.00	Not Listed	30	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Maxon, Model: 0.5M Kinedizer	8	4.00	2,000	30	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Maxon, Model: 0.5M Kinedizer	8	4.00	1,000-1,200	30	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Maxon, Model: 2.5M Kinedizer	4	10.00	500-960	30	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Maxon, Model: 2.5M Kinedizer	4	10.00	Not Listed	30	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Maxon, Model: IEI XF STR	1	4.00	500-960	30	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Maxon, Model: IEI XF STR	1	4.00	Not Listed	30	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Bloom Engineering, Model: 1480-030	Not Searched	6.40	900	40	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Bloom Engineering, Model: 1480-030, 1480-035	Not Searched	8.54	900	40	Not Listed

* Not corrected to 3% O2; ^ RECLAIM emission factor (lb/MMScf); † Emission rate (lb/MMBtu)



No Change

Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces Units with No Source Test

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners	MMBTU/hr Input	Operating Temperature Range (°F)	Permit Limit (ppm @ 3% O2)	Furnace Type
Billet & Pre-Heat	Not Listed	N	Not Searched	Bloom Engineering, Model: 1480-030	Not Searched	6.40	1,000-1,200	40	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Bloom Engineering, Model: 1480-030	Not Searched	6.40	1,000-1,200	40	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Bloom Engineering, Model: 1480-030 and 1480-035	Not Searched	8.54	1,000-2,000	40	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Bloom Engineering, Model: 1480-035	Not Searched	12.00	2,000	40	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Eclipse, Model: M8823	Not Searched	6.40	1,750-2,200	60	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Not Listed	Not Searched	22.00	Not Listed	50	Not Listed
Billet & Pre-Heat	3354	Y	Not Searched	Granco Clark, Model: 1116-50-6 SST-Hot-Jet, Low NOx	Not Searched	10.80	950	50	Not Listed
Billet & Pre-Heat	3354	Y	Not Searched	Not Listed	Not Searched	7.20	680-950	30	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	North American, Model: 306507	Not Searched	4.12	400	50	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Not Listed	Not Searched	9.00	400	60	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Not Listed	5	4.36	900	50	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Not Listed	Not Searched	5.00	900	48	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Not Listed	Not Searched	3.60	950	60	Not Listed
Billet & Pre-Heat	Not Listed	N	Not Searched	Not Listed	Not Searched	3.60	Not Listed	50	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hauck, Model: Star, Low NOx	Not Searched	4.00	1,900-2,150	50	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hauck, Model: Star, Low NOx	Not Searched	4.00	1,900-2,150	50	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	North American, Model: 4442-5, Low NOx	6	6.00	1,600-2,200	130^	Not Listed
Forging & Drop Forge	3542	Y	Not Searched	Not Listed	Not Searched	4.80	2,200	100^	Not Listed
Forging & Drop Forge	3542	Y	Not Searched	Not Listed	Not Searched	5.20	2,200	100^	Not Listed
Forging & Drop Forge	3542	Y	Not Searched	Not Listed	Not Searched	5.20	2,200	100^	Not Listed
Forging & Drop Forge	3542	Y	Not Searched	Not Listed	Not Searched	5.20	2,200	100^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	North American, Model: 4422-4	Not Searched	2.30	1,200 - 1,600	130^	Not Listed

* Not corrected to 3% O2; ^ RECLAIM emission factor (lb/MMScf); † Emission rate (lb/MMBtu)



No Change

Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces Units with No Source Test

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners	MMBTU/hr Input	Operating Temperature Range (°F)	Permit Limit (ppm @ 3% O2)	Furnace Type
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB-15	Not Searched	3.00	1,900-2,150	213^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB-15	Not Searched	3.00	1,900-2,150	213^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB-15	Not Searched	3.00	1,900-2,150	130^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB-15	Not Searched	3.00	1,900-2,150	130^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB-15	Not Searched	3.00	1,900-2,150	213^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB-15	Not Searched	3.00	1,900-2,150	130^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB-15	Not Searched	3.00	1,900-2,150	213^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB-10	Not Searched	3.00	1,900-2,150	213^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB-15	Not Searched	3.00	1,900-2,150	213^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB-15	Not Searched	3.00	1,900-2,150	213^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB-15	Not Searched	3.00	1,900-2,150	213^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB-15	Not Searched	3.00	1,900-2,150	213^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Not Listed	Not Searched	3.00	1,900-2,150	213^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB	Not Searched	3.00	1,900-2,150	130^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB	Not Searched	3.00	1,900-2,150	213^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	North American, Model: 2324-35/T-14, 1400 CFM	Not Searched	3.00	1,900-2,150	130^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB-15	Not Searched	3.00	1,900-2,150	130^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hauck, Model: MVG115MVR	Not Searched	3.40	1,900-2,150	130^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	North American, Model: 4422-5	Not Searched	3.80	1,900-2,150	130^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB-10	Not Searched	4.00	1,900-2,150	213^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Eclipse, Model: 320 RAH	Not Searched	4.00	1,900-2,150	213^	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hauck, Model: Star, Low NOx	Not Searched	4.00	1,900-2,150	0.038†	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hauck, Model: Star, Low NOx	Not Searched	4.00	1,900-2,150	50	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hauck, Model: Star, Low NOx	Not Searched	4.00	1,900-2,150	50	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hauck, Model: Star, Low NOx	Not Searched	4.00	1,900-2,150	50	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hauck, Model: Star, Low NOx	Not Searched	4.00	1,900-2,150	50	Not Listed

* Not corrected to 3% O2; ^ RECLAIM emission factor (lb/MMScf); † Emission rate (lb/MMBtu)



No Change

Proposed Rule 1147.2 – NO_x Reductions from Metal Melting and Heating Furnaces Units with No Source Test

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners	MMBTU/hr Input	Operating Temperature Range (°F)	Permit Limit (ppm @ 3% O ₂)	Furnace Type
Forging & Drop Forge	3463	Y	Not Searched	Maxon, Kinedizer-LE	Not Searched	5.20	1,900-2,400	50	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Maxon, Kinedizer-LE	Not Searched	5.20	1,900-2,400	60	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	North American, Model: 4832-6/4832-5	Not Searched	6.00	1,900-2,400	130 [^]	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Hotworks, Model: SRB-10	Not Searched	6.00	1,900-2,400	213 [^]	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Not Listed	Not Searched	6.00	1,900-2,400	213 [^]	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	Maxon, Kinedizer-LE	Not Searched	6.00	1,900-2,400	130 [^]	Not Listed
Forging & Drop Forge	3463	Y	Not Searched	North American, Model: 4832-6	Not Searched	6.60	1,900-2,400	130 [^]	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	Low NO _x	Not Searched	32.00	2,300	40	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	North American, Model: 4832-5	Not Searched	2.40	1,600-2,200	130 [^]	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	North American, Model: 4898-7A, nat. gas or propane	Not Searched	3.00	1,600-2,200	130 [^]	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	Eclipse, Model: FN0150, Low NO _x	Not Searched	3.00	1,600-2,200	50	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	Eclipse, Model: FN0150, Low NO _x	Not Searched	3.00	1,600-2,200	50	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	Hauck, Model: RSVG-125, Low NO _x	Not Searched	4.00	1,600-2,200	130 [^]	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	Hauck, Model: RSVG-125, Low NO _x	Not Searched	4.00	1,600-2,200	130 [^]	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	North American, Model: 4832-5	Not Searched	4.79	1,600-2,200	130 [^]	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	North American, Model: 4832-5	Not Searched	4.79	1,600-2,200	130 [^]	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	North American, Model: 4832-6/4832-5	Not Searched	4.79	1,600-2,200	130 [^]	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	Hauck Manufacturing, Model: RSVG-130, Low NO _x	Not Searched	5.20	1,600-2,200	60	Not Listed

* Not corrected to 3% O₂; ^ RECLAIM emission factor (lb/MMScf); † Emission rate (lb/MMBtu)



No Change

Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces Units with No Source Test

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners	MMBTU/hr Input	Operating Temperature Range (°F)	Permit Limit (ppm @ 3% O2)	Furnace Type
Forging & Drop Forge	3462	Y	Not Searched	Hauck Manufacturing, Model: RSVG-130, Low NOx	Not Searched	5.20	1,600-2,200	60	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	North American, Model: 4442-5, Low NOx	Not Searched	6.00	1,600-2,200	130^	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	Eclipse, Model: WX600, Low NOx	Not Searched	6.00	1,600-2,200	50	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	Not Listed	Not Searched	7.60	1,600-2,200	130^	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	Not Listed	Not Searched	7.60	1,600-2,200	130^	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	Not Listed	Not Searched	7.60	1,600-2,200	130^	Not Listed
Forging & Drop Forge	3312	Y	Not Searched	North American	Not Searched	10.00	Not Listed	130^	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	North American, Model: 6514-6, gas- or oil-fired	Not Searched	3.57	1,600-2,300	130^	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	North American, Model: 6514-6, gas- or oil-fired	Not Searched	3.57	1,600-2,300	130^	Not Listed
Forging & Drop Forge	3462	Y	Not Searched	North American, Model: 6836-25-6, gas- or oil-fired	Not Searched	3.87	1,600-2,300	130^	Not Listed
Forging & Drop Forge	Not Listed	N	Not Searched	Eclipse, Model: TJ100	Not Searched	6.00	1,600-2,400	60	Not Listed
Forging & Drop Forge	Not Listed	N	Not Searched	Eclipse, Model: 84MVTA	Not Searched	2.40	1,750-2,200	60	Not Listed
Forging & Drop Forge	Not Listed	N	Not Searched	Eclipse, Model: 75TJ	Not Searched	6.00	1,750-2,200	60	Not Listed
Forging & Drop Forge	Not Listed	N	Not Searched	Eclipse, Model: 75TJ	Not Searched	6.00	1,750-2,200	60	Not Listed
Forging & Drop Forge	Not Listed	N	Not Searched	Eclipse, Model: 75TJ	Not Searched	6.00	1,750-2,200	60	Not Listed
Forging & Drop Forge	Not Listed	N	Not Searched	North American Manufacturing, Model: 4832-6	Not Searched	3.50	1,500-2,200	60	Box
Forging & Drop Forge	Not Listed	N	Not Searched	Not Listed	Not Searched	5.40	950	60	Not Listed
Other - Heating	3462	Y	Not Searched	Eclipse, Model: FN150, Low NOx	6	9.00	1,725-2,150	50	Not Listed
Other - Heating	3462	Y	Not Searched	Hauck, Model: SVG-125B-001, Low NOx	Not Searched	6.00	1,725-2,150	50	Not Listed
Other - Heating	3462	Y	Not Searched	Hauck, Model: SVG-125B-001, Low NOx	Not Searched	6.00	1,725-2,150	50	Not Listed
Other - Heating	3462	Y	Not Searched	Eclipse, Model: FN200, Low NOx	Not Searched	20.00	1,725-2,150	50	Not Listed

* Not corrected to 3% O2; ^ RECLAIM emission factor (lb/MMScf); † Emission rate (lb/MMBtu)



No Change

Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces Units with No Source Test

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners	MMBTU/hr Input	Operating Temperature Range (°F)	Permit Limit (ppm @ 3% O2)	Furnace Type
Other - Heating	3462	Y	Not Searched	Eclipse, Model: FN200, Low NOx	Not Searched	20.00	1,725-2,150	50	Not Listed
Other - Heating	Not Listed	N	Not Searched	Eclipse, Model: SMJ8619-7-1/2	Not Searched	6.00	1,650	60	Not Listed
Other - Heating	Not Listed	N	Not Searched	Not Listed	Not Searched	7.50	1,250-1,650	60	Not Listed
Other - Heating	Not Listed	N	Not Searched	Not Listed	Not Searched	8.00	500-960	50	Not Listed
Other - Heating	Not Listed	N	Not Searched	Not Listed	Not Searched	8.00	500-960	50	Not Listed
Other - Heating	Not Listed	N	Not Searched	Eclipse, TJ0100	Not Searched	4.00	1,250-1,750	60	Not Listed
Other - Heating	3354	Y	Not Searched	Weishaupt GMBH, Model: WG40, Low NOx	Not Searched	3.76	340-450	50	Not Listed
Other - Heating	3354	Y	Not Searched	Granco Clark	Not Searched	5.40	1,221	130^	Not Listed
Other - Heating	3354	Y	Not Searched	Granco Clark, Model: Hot Jet	Not Searched	5.40	1,221	130^	Not Listed
Other - Heating	3462	Y	Not Searched	Hotwork Combustion Technology, Model: HV-400	Not Searched	3.00	2,300	60	Not Listed
Other - Heating	3462	Y	Not Searched	Not Listed	Not Searched	5.90	2,300	62	Not Listed
Other - Heating	3462	Y	Not Searched	Not Listed	Not Searched	5.90	2,300	87	Not Listed
Other - Heating	3462	Y	Not Searched	Not Listed	Not Searched	5.90	2,300	55	Not Listed
Other - Heating	3462	Y	Not Searched	Zedtec, Model: HV-400 & HV-300	Not Searched	6.00	2,300	50	Not Listed
Other - Heating	3462	Y	Not Searched	Not Listed	Not Searched	6.00	2,300	50	Not Listed
Other - Heating	3462	Y	Not Searched	Zedtec, Model: HV400, Low NOx	Not Searched	6.00	2,300	50	Not Listed
Other - Heating	3462	Y	Not Searched	GDA Associates, Model: HV300, cold air pulsed	Not Searched	8.00	2,300	50	Not Listed
Other - Heating	3462	Y	Not Searched	Low NOx	Not Searched	8.00	2,300	50	Not Listed
Other - Heating	3462	Y	Not Searched	Not Listed	Not Searched	9.60	2,300	80	Not Listed
Other - Heating	3462	Y	Not Searched	Hotwork, Model: HV400	Not Searched	11.20	2,300	50	Not Listed
Other - Heating	3462	Y	Not Searched	Hotwork, Model: HV400	Not Searched	11.20	2,300	50	Not Listed
Other - Heating	3462	Y	Not Searched	Eclipse, Model: 85TA-C	Not Searched	12.00	2,300	55	Not Listed
Other - Heating	3462	Y	Not Searched	Hotwork, Model: HV-300	Not Searched	16.00	2,300	47.5	Not Listed
Other - Heating	Not Listed	N	Not Searched	Thermjet, Model: TJ0200	Not Searched	4.00	800-1,750	60	Not Listed

* Not corrected to 3% O2; ^ RECLAIM emission factor (lb/MMScf); † Emission rate (lb/MMBtu)



No Change

Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces Units with No Source Test

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners	MMBTU/hr Input	Operating Temperature Range (°F)	Permit Limit (ppm @ 3% O2)	Furnace Type
Other - Heating	3398	Y	Not Searched	North American, Model: 4225-7-BZ	Not Searched	1.62	650-1,200	50	Not Listed
Other - Heating	3398	Y	Not Searched	North American, Model: 4442CS-3-F	Not Searched	2.08	Not Listed	50	Not Listed
Other - Heating	3398	Y	Not Searched	North American, Model: 4442CS-3-F	Not Searched	2.08	Not Listed	50	Not Listed
Other - Heating	3398	Y	Not Searched	North American, Model: 4442CS-3-F	Not Searched	3.46	1,000-2,000	50	Not Listed
Other - Heating	3398	Y	Not Searched	Not Listed	Not Searched	4.56	1,300-1,550	130^	Not Listed
Other - Heating	3398	Y	Not Searched	North American, Model: 4441-5-ASH/F	Not Searched	6.61	Not Listed	50	Not Listed
Other - Heating	3398	Y	Not Searched	North American, Model: 4441-4-A	Not Searched	8.00	1,000-2,000	50	Not Listed
Other - Heating	3398	Y	Not Searched	North American, Model: 4441-1-A	Not Searched	8.40	1,000-2,000	50	Not Listed
Other - Heating	Not Listed	N	Not Searched	Not Listed	Not Searched	2.79	Not Listed	60	Not Listed
Other - Heating	Not Listed	N	Not Searched	Not Listed	Not Searched	2.79	Not Listed	60	Not Listed
Other - Heating	Not Listed	N	Not Searched	Eclipse, Model: TFB075	Not Searched	3.00	870-1,055	60	Not Listed
Other - Heating	Not Listed	N	Not Searched	Eclipse, Model: TFB075	Not Searched	3.00	870-1,055	60	Not Listed
Other - Heating	Not Listed	N	Not Searched	Eclipse, Model: TFB075	Not Searched	3.00	Not Listed	60	Not Listed
Other - Heating	Not Listed	N	Not Searched	Eclipse, Model: TFB075	Not Searched	3.00	Not Listed	60	Not Listed
Other - Heating	Not Listed	N	Not Searched	Not Listed	Not Searched	3.40	870-1000	60	Not Listed
Other - Heating	Not Listed	N	Not Searched	Not Listed	Not Searched	3.50	870-1,055	60	Not Listed
Other - Heating	Not Listed	N	Not Searched	Eclipse, Model: 1321P and 1401P	Not Searched	4.25	Not Listed	60	Not Listed
Other - Heating	Not Listed	N	Not Searched	Bloom Engineering, Model: 2300-056	Not Searched	6.60	1,020-1,200	50	Not Listed
Other - Heating	3341	Y	Not Searched	North American, Model: 6514-8B	Not Searched	12.00	1,070	130^	Not Listed
Other - Heating	3341	Y	Not Searched	North American, Model: 6514-8B	Not Searched	14.00	1,070	130^	Not Listed
Other - Heating	3341	Y	Not Searched	North American Manufacturing Company, Model: 6575-8-B	Not Searched	14.00	Not Listed	130^	Not Listed

* Not corrected to 3% O2; ^ RECLAIM emission factor (lb/MMScf); † Emission rate (lb/MMBtu)



No Change

Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces Units with No Source Test

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners	MMBTU/hr Input	Operating Temperature Range (°F)	Permit Limit (ppm @ 3% O2)	Furnace Type
Other - Heating	Not Listed	N	Not Searched	Eclipse, Model: WX300	Not Searched	3.00	Not Listed	50	Not Listed
Other - Heating	Not Listed	N	Not Searched	Eclipse, Model: TJ040	Not Searched	3.20	Not Listed	50	Not Listed
Other - Heating	Not Listed	N	Not Searched	Not Listed	Not Searched	3.80	1,210	60	Not Listed
Other - Heating	Not Listed	N	Not Searched	Not Listed	Not Searched	3.80	1,210	60	Not Listed
Other - Heating	Not Listed	N	Not Searched	Eclipse, Model: TJ0150	Not Searched	3.00	1,220-1,600	60	Not Listed
Other - Heating	Not Listed	N	Not Searched	Eclipse, Model: Tj0200	Not Searched	4.00	1,220-1,600	60	Not Listed
Other - Heating	3341	Y	Not Searched	Eclipse 126 TA-C	Not Searched	2.40	Not Listed	130^	Not Listed
Other - Heating	3341	Y	Not Searched	Eclipse 126 TA-C	Not Searched	2.40	Not Listed	130^	Not Listed
Other - Heating	3341	Y	Not Searched	Not Listed	Not Searched	3.00	1,910	130^	Not Listed
Other - Heating	3369	Y	Not Searched	Natural gas or LPG burners	Not Searched	3.55	Not Listed	130^	Not Listed
Other - Heating	3369	Y	Not Searched	Natural gas or LPG burners	Not Searched	3.55	Not Listed	130^	Not Listed
Other - Heating	3462	Y	Not Searched	North American, Model: 441-5-ASH/F, Tempest, Low NOx	Not Searched	3.00	1,600-2,300	130^	Not Listed
Other - Heating	3462	Y	Not Searched	North American, Model: 441-5-ASH/F, Tempest, Low NOx	Not Searched	3.00	1,600-2,300	130^	Not Listed
Other - Heating	3462	Y	Not Searched	Not Listed	Not Searched	3.57	2,200	130^	Not Listed
Other - Heating	3462	Y	Not Searched	Not Listed	Not Searched	5.92	2,200	130^	Not Listed
Other - Heating	Not Listed	N	Not Searched	Eclipse, Model: Thermjet TJ150	Not Searched	9.00	1,550	50	Not Listed
Other - Heating	Not Listed	N	Not Searched	Eclipse, Model: 3M638A	Not Searched	2.40	1,750-2,200	60	Not Listed
Other - Heating	Not Listed	N	Not Searched	Eclipse, Model: M6812-1	Not Searched	6.00	1,750-2,200	60	Not Listed
Other - Heating	Not Listed	N	Not Searched	Tempest, Model: 4442-3	Not Searched	1.57	1,200-1,400	60	Not Listed
Homogenizing	3341	Y	Not Searched	Winnox, Model: WX400 & WX100	Not Searched	12.40	843	45	Not Listed
Re-heat	Not Listed	Y	Not Searched	North American Combustion, Model: Twin Bed II	Not Searched	143.50	2,000	213^	Not Listed
Crucible & Pit	3317	N	Not Searched	Not Listed	Not Searched	0.40	Not Listed	60	Not Listed
Kettle & Pot	3317	N	Not Searched	Not Listed	Not Searched	1.60	787	60	Not Listed
Kettle & Pot	3317	N	Not Searched	Not Listed	Not Searched	4.55	787	60	Not Listed

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No Change

Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces Units with No Source Test

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners	MMBTU/hr Input	Operating Temperature Range (°F)	Permit Limit (ppm @ 3% O2)	Furnace Type
Crucible & Pit	3339	N	Not Searched	Midco, Model: G56	Not Searched	2.00	787.2-1,221	60	Not Listed
Other - Melting	3339	N	Not Searched	North American Manufacturing Co, Model: Hi Ram	Not Searched	12.30	Not Listed	60	Not Listed
Rotary	3339	N	Not Searched	Eclipse, Low NOx, Model: TJ 500 HBHN-ZX	Not Searched	5.00	787.2-1,221	60	Not Listed
Rotary	3363	N	Not Searched	Eclipse Thermjet, Model: 200TJ	Not Searched	4.00	1,221	60	Not Listed
Rotary	3363	N	Not Searched	Eclipse Thermjet, Model: TJ2602000-A2AMBHNDIE	Not Searched	2.96	1,221	60	Not Listed
Reverberatory	3363	N	Not Searched	Not Listed	Not Searched	0.40	1,221	60	Not Listed
Reverberatory	3363	N	Not Searched	Not Listed	Not Searched	0.47	1,221	60	Not Listed
Kettle & Pot	3363	N	Not Searched	Not Listed	Not Searched	0.58	787	60	Not Listed
Kettle & Pot	3363	N	Not Searched	Not Listed	Not Searched	0.33	787	60	Not Listed
Kettle & Pot	3363	N	Not Searched	Not Listed	Not Searched	0.60	787	60	Not Listed
Kettle & Pot	3363	N	Not Searched	Not Listed	Not Searched	0.50	787	60	Not Listed
Kettle & Pot	3363	N	Not Searched	Not Listed	Not Searched	0.60	787	60	Not Listed
Holding	3363	N	Not Searched	North American, Model: 47.25-E2,	Not Searched	0.17	787	60	Not Listed
Holding	3363	N	Not Searched	North American, Model: 47.25-E2,	Not Searched	0.17	787	60	Not Listed
Holding	3363	N	Not Searched	North American, Model: 47.25-E2,	Not Searched	0.17	787	60	Not Listed
Holding	3363	N	Not Searched	Not Listed	Not Searched	1.33	787	60	Not Listed
Reverberatory	3363	N	Not Searched	Not Listed	Not Searched	1.08	787	60	Not Listed
Reverberatory	3363	N	Not Searched	Eclipse, Thermjet, Model: TJ150	Not Searched	3.00	787.2-1,221	60	Not Listed
Reverberatory	3363	N	Not Searched	Not Listed	Not Searched	Not Listed	787.2-1,221	60	Not Listed
Reverberatory	3365	N	Not Searched	Hauck PBG Package	Not Searched	3.00	1,221	60	Not Listed
Reverberatory	3365	N	Not Searched	North American Manufacturing Co	Not Searched	6.90	1,221	40	Not Listed
Reverberatory	3365	N	Not Searched	North American, Model: 4832-7	Not Searched	4.54	1,221	60	Not Listed

* Not corrected to 3% O2; ^ RECLAIM emission factor (lb/MMScf); † Emission rate (lb/MMBtu)



No Change

Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces Units with No Source Test

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners	MMBTU/hr Input	Operating Temperature Range (°F)	Permit Limit (ppm @ 3% O2)	Furnace Type
Reverberatory	3365	N	Not Searched	North American, Flat Flame, Radiant Roof	Not Searched	4.00	1,221	60	Not Listed
Crucible & Pit	3444	N	Not Searched	Not Listed	Not Searched	0.48	622	60	Not Listed
Crucible & Pit	3444	N	Not Searched	Not Listed	Not Searched	0.62	787	60	Not Listed
Crucible & Pit	3444	N	Not Searched	Not Listed	Not Searched	0.62	787	60	Not Listed
Crucible & Pit	3444	N	Not Searched	Not Listed	Not Searched	0.26	787	60	Not Listed
Crucible & Pit	3444	N	Not Searched	Not Listed	Not Searched	1.00	725	60	Not Listed
Crucible & Pit	3444	N	Not Searched	Not Listed	Not Searched	1.00	622	60	Not Listed
Crucible & Pit	3497	N	Not Searched	Not Listed	Not Searched	2.00	1,221	60	Not Listed
Crucible & Pit	3499	N	Not Searched	Not Listed	Not Searched	0.50	Not Listed	60	Not Listed
Other - Melting	3312	N	Not Searched	Not Listed	Not Searched	Not Listed	Not Listed	60	Not Listed
Other - Melting	3324	N	Not Searched	Not Listed	Not Searched	Not Listed	Not Listed	60	Not Listed
Other - Melting	3324	N	Not Searched	Not Listed	Not Searched	Not Listed	Not Listed	60	Not Listed
Other - Melting	3341	N	Not Searched	Not Listed	Not Searched	1.20	2,300	60	Not Listed
Crucible & Pit	3341	N	Not Searched	Not Listed	Not Searched	0.35	2,300	60	Not Listed
Crucible & Pit	3354	N	Not Searched	Eclipse, Model: Thermjet TJ150	Not Searched	3.00	1,221	60	Not Listed
Crucible & Pit	3354	N	Not Searched	Eclipse, Model: Thermjet TJ150	Not Searched	3.00	1,221	60	Not Listed
Crucible & Pit	3369	N	Not Searched	Thermtronix, Model: 521-9002	Not Searched	2.50	1,221	60	Not Listed
Reverberatory	3369	N	Not Searched	Eclipse	Not Searched	1.50	1,221	60	Not Listed
Reverberatory	3369	N	Not Searched	Not Listed	Not Searched	1.20	1,221	60	Not Listed
Crucible & Pit	3369	N	Not Searched	Eclipse, Model: Z10-JIB-S	Not Searched	0.50	725-787.2	60	Not Listed
Crucible & Pit	3369	N	Not Searched	Not Listed	Not Searched	2.50	1,221	60	Not Listed
Crucible & Pit	3369	N	Not Searched	Not Listed	Not Searched	2.50	1,221	60	Not Listed
Reverberatory	3369	N	Not Searched	Eclipse, Model: TJ100 & TJ075	Not Searched	2.75	1,221	60	Not Listed
Reverberatory	3369	N	Not Searched	Natural Gas or Propane Burners	Not Searched	1.90	1,221	60	Not Listed
Reverberatory	3369	N	Not Searched	North American, Model: 4832A	Not Searched	1.04	1,221	60	Not Listed
Reverberatory	3365	N	Not Searched	Eclipse, Model: TJ0150 and TJ0200	Not Searched	5.00	1,221	60	Not Listed

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No Change

Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces Units with No Source Test

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners	MMBTU/hr Input	Operating Temperature Range (°F)	Permit Limit (ppm @ 3% O2)	Furnace Type
Reverberatory	3365	N	Not Searched	Eclipse, Model: TJ0150 and TJ0200	Not Searched	5.00	1,221	60	Not Listed
Other - Melting	3365	N	Not Searched	Not Listed	Not Searched	Not Listed	Not Listed	60	Not Listed
Other - Melting	3365	N	Not Searched	Not Listed	Not Searched	Not Listed	Not Listed	60	Not Listed
Kettle & Pot	3471	N	Not Searched	Not Listed	Not Searched	0.08	622	60	Not Listed
Kettle & Pot	9999	N	Not Searched	Johnson	Not Searched	0.18	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.11	622	60	Not Listed
Kettle & Pot	3861	N	Not Searched	Not Listed	Not Searched	0.10	622	60	Not Listed
Kettle & Pot	3861	N	Not Searched	Not Listed	Not Searched	0.20	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.20	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.20	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.20	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.50	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.50	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.50	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.50	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.50	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.50	622	60	Not Listed
Kettle & Pot	3369	N	Not Searched	Not Listed	Not Searched	1.00	622	60	Not Listed
Kettle & Pot	3369	N	Not Searched	Not Listed	Not Searched	0.25	622	60	Not Listed
Kettle & Pot	3369	N	Not Searched	Not Listed	Not Searched	1.00	622	60	Not Listed
Kettle & Pot	3369	N	Not Searched	Not Listed	Not Searched	1.00	622	60	Not Listed
Kettle & Pot	3369	N	Not Searched	Not Listed	Not Searched	1.00	622	60	Not Listed
Kettle & Pot	3369	N	Not Searched	Not Listed	Not Searched	0.50	622	60	Not Listed
Kettle & Pot	3369	N	Not Searched	Eclipse, Model: RA-40	Not Searched	0.85	622	60	Not Listed
Kettle & Pot	3369	N	Not Searched	Eclipse, Model: RA-025	Not Searched	1.50	622	60	Not Listed
Kettle & Pot	3369	N	Not Searched	Eclipse, Model: RA-025	Not Searched	0.50	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.15	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.15	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.35	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.15	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.15	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.15	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.15	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.15	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.15	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.15	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.15	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.15	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.15	622	60	Not Listed

* Not corrected to 3% O2; ^ RECLAIM emission factor (lb/MMScf); † Emission rate (lb/MMBtu)



No Change

Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces Units with No Source Test

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners	MMBTU/hr Input	Operating Temperature Range (°F)	Permit Limit (ppm @ 3% O2)	Furnace Type
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.15	622	60	Not Listed
Kettle & Pot	Not Listed	N	Not Searched	Eclipse, Model: TJ075	Not Searched	0.75	787	60	Not Listed
Kettle & Pot	Not Listed	N	Not Searched	Eclipse, Model: TJ075	Not Searched	0.75	622	60	Not Listed
Other - Melting	3691	N	Not Searched	Not Listed	Not Searched	0.50	622	60	Not Listed
Other - Melting	3691	N	Not Searched	Not Listed	Not Searched	0.45	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.06	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.06	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.06	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	Not Listed	622	60	Not Listed
Kettle & Pot	Not Listed	N	Not Searched	Eclipse	Not Searched	0.40	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.10	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.10	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.25	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.25	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.25	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.13	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.30	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.35	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.35	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Eclipse, Model: Winnox WX0100	Not Searched	1.00	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Eclipse, Model: Winnox WX0050	Not Searched	1.00	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Eclipse, Model: Winnox WX0050	Not Searched	1.00	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Eclipse, Model: Winnox WX0050	Not Searched	1.00	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Eclipse, Model: WX0050	Not Searched	1.00	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Eclipse, Model: WX0050	Not Searched	1.00	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Eclipse, Model: WX0050	Not Searched	1.00	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Eclipse, Model: Winnox WX0050	Not Searched	1.00	622	30	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	1.20	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	1.20	622	60	Not Listed

* Not corrected to 3% O2; ^ RECLAIM emission factor (lb/MMScf); † Emission rate (lb/MMBtu)



No Change

Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces Units with No Source Test

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners	MMBTU/hr Input	Operating Temperature Range (°F)	Permit Limit (ppm @ 3% O2)	Furnace Type
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	1.20	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	1.20	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	1.20	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	1.20	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	1.20	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	1.20	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.50	622	60	Not Listed
Kettle & Pot	3691	N	Not Searched	Not Listed	Not Searched	0.50	622	60	Not Listed
Other - Melting	Not Listed	N	Not Searched	Eclipse, Model: TJ0150	Not Searched	4.50	1,221	60	Not Listed
Kettle & Pot	Not Listed	N	Not Searched	Not Listed	Not Searched	0.36	622	60	Not Listed
Kettle & Pot	Not Listed	N	Not Searched	Not Listed	Not Searched	0.36	622	60	Not Listed
Reverberatory	Not Listed	N	Not Searched	Thermtronix, Model: 9000 Power Plus	Not Searched	1.30	787.2-1,221	60	Not Listed
Crucible & Pit	Not Listed	N	Not Searched	Midco	Not Searched	1.08	787.2-1,221	60	Not Listed
Other - Melting	3312	Y	Not Searched	Not Listed	Not Searched	1.00	Not Listed	130^	Not Listed
Crucible & Pit	3341	Y	Not Searched	Not Listed	Not Searched	1.50	1,800-1,900	130^	Not Listed
Crucible & Pit	3341	Y	Not Searched	Not Listed	Not Searched	1.62	1,950	130^	Not Listed
Crucible & Pit	3341	Y	Not Searched	Not Listed	Not Searched	1.50	1,950	130^	Not Listed
Reverberatory	3341	Y	Not Searched	Eclipse, Model: 500 TJ	Not Searched	5.00	Not Listed	60	Not Listed
Kettle & Pot	3341	Y	Not Searched	North American, Model: 4422-8A, Liquified petroleum gas & natural gas	Not Searched	4.24	622	60	Not Listed
Kettle & Pot	3341	Y	Not Searched	North American, Model: 4422-8A, Liquified petroleum gas & natural gas	Not Searched	4.24	622	60	Not Listed
Kettle & Pot	3341	Y	Not Searched	North American, Model: 4422-8A, Liquified petroleum gas & natural gas	Not Searched	4.24	622	60	Not Listed

* Not corrected to 3% O2; ^ RECLAIM emission factor (lb/MMScf); † Emission rate (lb/MMBtu)



No Change

Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces Units with No Source Test

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners	MMBTU/hr Input	Operating Temperature Range (°F)	Permit Limit (ppm @ 3% O2)	Furnace Type
Kettle & Pot	3341	Y	Not Searched	North American, Model: 4422-8A, Liquefied petroleum gas & natural gas	Not Searched	4.24	622	60	Not Listed
Kettle & Pot	3341	Y	Not Searched	North American, Model: 4422-8A, Liquefied petroleum gas & natural gas	Not Searched	4.24	622	60	Not Listed
Kettle & Pot	3341	Y	Not Searched	North American, Model: 4422-8A, Liquefied petroleum gas & natural gas	Not Searched	4.24	622	60	Not Listed
Kettle & Pot	3341	Y	Not Searched	Eclipse, Model: WX300 Type Winnox, natural gas or propane	Not Searched	3.60	622	130^	Not Listed
Other - Melting	3341	Y	Not Searched	North American Combustion, Inc, Natural gas or propane, with oxygen enrichment	Not Searched	34.00	622	130^	Not Listed
Reverberatory	3341	Y	Not Searched	Not Listed	Not Searched	3.26	622	130^	Not Listed
Rotary	3341	Y	Not Searched	North American, Model: 6570-9-PTF	Not Searched	6.00	1,250	130^	Not Listed
Rotary	3341	Y	Not Searched	North American, Model: 6570-9-PTF	Not Searched	6.00	1,250	130^	Not Listed
Other - Melting	3341	Y	Not Searched	Bloom Engineering, Model: 1150+100	Not Searched	16.00	1,221	60	Not Listed
Other - Melting	3341	Y	Not Searched	Bloom Engineering, Model: 1150+100	Not Searched	16.00	1,600-2,000	60	Not Listed
Other - Melting	3354	Y	Not Searched	Granco Clark	Not Searched	5.40	1,221	130^	Not Listed
Other - Melting	3354	Y	Not Searched	Granco Clark, Model: Hot Jet	Not Searched	5.40	1,221	130^	Not Listed
Reverberatory	3354	Y	Not Searched	North American Manufacturing Company, Model: 4575-9	Not Searched	32.00	1,221	60	Not Listed

* Not corrected to 3% O2; ^ RECLAIM emission factor (lb/MMScf); † Emission rate (lb/MMBtu)



No Change

**Proposed Rule 1147.2 – NOx Reductions from Metal Melting and Heating Furnaces
Units with No Source Test**

Equipment Sub-Category	Industry (SIC Code)	RECLAIM (Y/N)	New Install or Retrofit	Burner Manufacturer and Model Number	Number of Burners	MMBTU/hr Input	Operating Temperature Range (°F)	Permit Limit (ppm @ 3% O2)	Furnace Type
Other - Melting	3354	Y	Not Searched	Eclipse, Model: wx500	Not Searched	30.00	1,221	50	Not Listed
Reverberatory	3354	Y	Not Searched	Bloom Engineering, Model: S 1150-11, Low NOx; North American Manufacturing Co., Model: 4575-9, Low NOx	Not Searched	38.00	1,221	60	Not Listed
Reverberatory	3354	Y	Not Searched	Bloom Engineering, Model: S 1150-11; North American Manufacturing Co., Model: 4575-9	Not Searched	38.00	1,221	60	Not Listed
Reverberatory	3369	Y	Not Searched	Natural gas or LPG burners	Not Searched	0.60	1,300-1,350	130^	Not Listed
Crucible & Pit	3369	Y	Not Searched	Natural gas or LPG burners	Not Searched	2.25	1,221	130^	Not Listed
Crucible & Pit	3369	Y	Not Searched	Natural gas or LPG burners	Not Searched	1.00	1,221	130^	Not Listed
Crucible & Pit	3369	Y	Not Searched	Natural gas or LPG burners	Not Searched	2.25	1,221	130^	Not Listed
Crucible & Pit	3369	Y	Not Searched	Natural gas or LPG burners	Not Searched	2.25	1,221	130^	Not Listed
Reverberatory	3714	Y	Not Searched	North American, Model 4832	Not Searched	20.80	1,221	130^	Not Listed

* Not corrected to 3% O2; ^ RECLAIM emission factor (lb/MMScf); † Emission rate (lb/MMBtu)