Aludyne-Alma

Violation Notice: B2864_VN_20220413

Concerning PTI No. 183-95A, 272-96, 05-00A.

Due April 20, 2022

Submitted By: Dan Rinke Human Resources Manager / EMR

VIOLATION NOTICE

On March 29, 2022, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), conducted an inspection of Aludyne located at 250 Adams Street, Alma, Michigan. The purpose of this inspection was to determine Aludyne's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Air Pollution Control Rules; and the conditions of Permit to Install (PTI) numbers 183-95A, 272-96, and 05-00A.

Process Description	Rule/Permit Condition Violated	Comments
Aluminum Melting Furnace No. 1053	PTI No. 183-95A, Special Condition 17	Material Limit of 1.0 lb flux per ton of aluminum exceeded during the following months: December 2018 (1.2 lb/ton) December 2019 (1.1 lb/ton)
Aluminum Melting Furnace No. 1100	PTI No. 272-96, Special Condition 17	Material Limit of 1 lb flux per ton of aluminum exceeded during the following months: December 2018 (1.2 lb/ton) December 2019 (1.1 lb/ton) July 2020 (1.1 lb/ton) April 2021 (1.2 lb/ton) May 2021 (1.4 lb/ton) June 2021 (1.2 lb/ton)

Special condition 17 of PTI numbers 183-95A and 272-96 limits flux usage for each furnace to 1.0 lb of flux per ton of aluminum melted.

The records provided to the AQD after the inspection demonstrate that the material limits for aluminum melting furnaces 1053 and 1100 have been exceeded. Aluminum melting furnace 1053 exceeded the limit in December 2018, and December 2019, at 1.2 lb/ton and 1.1 lb/ton, respectively. Aluminum melting furnace 1100 exceeded the limit in December 2018; December 2019; July 2020, and April – June 2021, ranging from exceedances of 1.1 lb/ton to 1.4 lb/ton.

Please initiate actions necessary to correct the cited violations and submit a written response to this Violation Notice by May 4, 2022, (which coincides with 21 calendar days from the date of this letter). The written response should include: the dates the violations occurred; an explanation of the causes and duration of the violations; whether the violations are ongoing; a summary of the actions that have been taken and are proposed to be taken to correct the violations and the dates by which these actions will take place; and what steps are being taken to prevent a reoccurrence.

Please submit the written response to EGLE, AQD, Lansing District, at Constitution Hall, Lansing District Office, First Floor South, Lansing, Michigan 48909 and submit a copy to Ms. Jenine Camilleri, Enforcement Unit Supervisor at EGLE, AQD, P.O. Box 30260, Lansing, Michigan 48909-7760. Please also email a copy of the written response to Michelle Luplow at Luplowm1@michigan.gov.

If Aludyne believes the above observations or statements are inaccurate or do not constitute violations of the applicable legal requirements cited, please provide appropriate factual information to explain your position.

Thank you for your attention to resolving the violations cited above and for the cooperation that was extended to me during my inspection of Aludyne. If you have any questions regarding the violations or the actions necessary to bring this facility into compliance, please contact me at the number listed below.

Sincerely,
Michelle Luplow
Environmental Quality Analyst

ACTION ITEMS

1. By 5/4/22 Provide Aludyne's determination on whether tracking aluminum melted per each furnace can be achieved. If it can, please start tracking tons of aluminum melted per furnace by this date and going forward. Please incorporate the tons of aluminum melted per furnace into your recordkeeping so that the calculations of flux per ton of aluminum reflects actual aluminum melted per furnace instead of using a weighted average of aluminum in the calculation. If it can't, we should consider a permit modification to get requirements in the 1053 and 1100 permits that Aludyne can comply with.

RESPONSE

The records provided to the AQD on 4/7/2022 were incorrect as demonstrated by the incorrect excel formula in the photo below. For several other months, not just those documented in the notice of violation (December 2018, July 2020, April 2021, May 2021, June 2021) we determined that the flux usage/tons of aluminum melted was calculated as a sum of all three furnaces in addition to the column totaling all three furnaces. Essentially this showed double the amount of flux used. We take full responsibility for this error and have corrected it on all our tracking spreadsheets both historically and moving forward.

Part Number	# Cav	Shot Weight	January Pieces	January Weight	January Shots	February Pieces	February Weight	February Shots	March Pieces	March Weight	March Shots	April Pieces	April Weight	April Shots	May Pieces	May Weight	May Shots	June Pieces	June Weight	June Shots
HL1W4A028AA	1	13.4	3781	[illegible]	[illegible]	2950	[illegible]	[illegible]	1967	[illegible]	[illegible]				9471	[illegible]	[illegible]	127830	[illegible]	[illegible]
HL1W4A028DA	1	13.4	11582	[illegible]	[illegible]	11993	[illegible]	[illegible]	4224	[illegible]	[illegible]				3867	[illegible]	[illegible]	6023	[illegible]	[illegible]
HL1W4C000EB	2	23.21	12750	[illegible]	[illegible]	9484	[illegible]	[illegible]	12870	[illegible]	[illegible]				3673	[illegible]	[illegible]	7871	[illegible]	[illegible]
		TOTALS:	567,776	1,985,583	177,948	[illegible]	1,946,048	164,911	[illegible]	1,582,825	114,255	[illegible]	12,979	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2,883,168	[illegible]

TOTAL ALUMINUM MELTED BY	
January	1,985,583
February	1,946,048
March	1,582,825
April	12,979
May	499,114
June	2,883,168
July	1,421,448
August	1,693,357
September	1,866,779
October	1,863,845
November	1,728,021
December	1,495,813
TOTAL:	**18,978,981**

TIMES FLUXED BY MONT TIMES FLUXED BY MONTH

	1053	1100	1106	TOTALS
January	15	24	10	123
February	4	57	13	185
March	8	29	6	108
April	0	0	0	0
May	1	6	5	30
June	0	12	6	45
July	0	54	38	230
August	3	45	35	208
September	0	35	21	140
October	7	40	28	188
November	0	40	28	170
December	11	35	25	178
TOTAL	49	377	215	1603
Average	4	31	18	134

*2.5 lbs of flux used for each time *2.5 lbs of flux used for each time

FLUX USAGE (lbs) / ALUMINUM MELTED (TON)

	1053	1100	1106
January	0.12	0.12	0.12
February	0.19	0.19	0.19
March	0.14	0.14	0.14
April			
May	0.12	0.42	0.12
June		0.11	0.03
July		0.32	0.32
August	0.25	0.86	0.25
September		0.52	0.15
October	0.70	)	0.20
November		0.69	0.20
December	0.83	0.83	0.24

Furthermore, Aludyne has determined that tracking aluminum melted by/per each furnace *can* be achieved. The flux tracking form has been updated to show 1) Aluminum melted by furnace, 2) Flux by furnace, 3) Hours of operation by furnace and 4) Flux usage per ton of aluminum melted by furnace. *(See photo below and separate attachment "2022 Flux Tracking").*

2022 Flux Usage Tracking

Part Number	Part Name	# Cav	Shot Weight	January Pieces	January Weight	January Shots	February Pieces	February Weight	February Shots	March Pieces	March Weight	March Shots	April Pieces	April Weight	April Shots	May Pieces	May Weight	May Shots	June Pieces	June Weight	June Shots	July Pieces	July Weight
28385401		2	4.6																				
38082170		2	5.8																				
38296298		6	12																				
40176001	T1xx Front Bearn	20	26.75	101640	[illegible]	[illegible]	64242	[illegible]	[illegible]	134670	[illegible]	[illegible]											
1L2W4224AA	P552 Bearing Cap	24	22.5																				
26060310/26063655		6	10.9																				
5401-125-001		4	21																				
5405-125-001		4	17																				
5606815/7810890		8	6																				
HL1W4A028AA	Ford Cover 8.8	1	13.4	2777	37212	2777	2630	35242	2630														
HL1W4A028DA	Ford Cover 9.75	1	13.4	[illegible]	[illegible]	[illegible]	5309	[illegible]	[illegible]	5910	[illegible]	[illegible]											
HL1W4C000EB	Torque Arm	2	23.21	[illegible]	[illegible]	[illegible]	6976	[illegible]	[illegible]	3206	[illegible]	[illegible]											
			TOTALS:	[illegible]	1,183,044	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1,243,205	[illegible]	0	0	0	0	0	0	0	0	0	0	0

TOTAL ALUMINUM MELTED BY MONTH:

MONTH	1053	1100	1106	TOTALS
January	0	919089	263954	1,183,044
February	0	1068449	253990	1,322,439
March	0	987085	256120	1,243,205
April				0
May				0
June				0
July				0
August				0
September				0
October				0
November				0
December				0
TOTAL:				3,748,688

TIMES FLUXED BY MONTH

MONTH	1053	1100	1106	TOTALS
January	0	22	11	83
February	0	27	11	95
March	0	30	8	95
April				0
May				0
June				0
July				0
August				0
September				0
October				0
November				0
December				0
TOTAL:				273
Average	0	26	10	23

*2.5 lbs of flux used for each time *2.5 lbs of flux used for each time

FLUX USAGE (lbs) / ALUMINUM MELTED

MONTH	1053	1100	1106	TOTALS
January		0.119684	0.208369	0.32805
February		0.126351	0.216544	0.34290
March		0.151963	0.156177	0.30814
April				0.00000
May				0.00000
June				0.00000
July				0.00000
August				0.00000
September				0.00000
October				0.00000
November				0.00000
December				0.00000
TOTAL:				0.97909

FURNACE HOURS OF OPERATION

MONTH	DAYS	1053	1100	1106
January	31	744	744	744
February	28	672	672	672
March	31	744	744	744
April	30			
May	31			
June	30			
July	31			
August	31			
September	30			
October	31			
November	30			
December	31			
TOTAL:			2,160	

Separating the metal melted and flux rates by furnace will prevent this incorrect calculation moving forward. This has been corrected it on all our tracking spreadsheets both historically and moving forward and will show that we are significantly below the recommended threshold of flux permitted.

Additionally although the rates of fluxing are extremely low, flux tracking is now updated weekly as opposed to monthly, to alert us more quickly if the de minimis of the permit is being encroached upon.

ACTION ITEMS

2. Begin tracking actual hours of operation on furnace 1106. Ensure that these adjusted operating hours for furnace 1106 are incorporated into our recordkeeping, in order to demonstrate that the 1lb of flux per hour (on a monthly basis) is being met.

RESPONSE

Furnace 1106's hours of active operation are now being tracked on the spreadsheet separate of the other furnaces. The flux process from start to finish take less than 5 minutes. The count of flux is recorded on a monthly basis.

CONCLUSION

Aludyne Alma sincerely hopes these corrective actions and our evidence of improvement address and satisfy the violation identified in the Department of Environment, Great Lakes, and Energy, Air Quality Division inspection. We appreciate the feedback and are committed to continuous improvement, adherence to lawful enterprise and protection of the environment, our natural resources and the people of our facility.

Sincerely, Dan Rinke

Human Resources Manager / EMR

2022 Flux Usage Tracking

Part Number	Part Name	# Cav	Shot Weight	January			February			March			April			May			June			
				Pieces	Weight	Shots	Pieces	Weight	Shots	Pieces	Weight	Shots	Pieces	Weight	Shots	Pieces	Weight	Shots	Pieces	Weight	Shots	Pieces
61313		1	5.84																			
61333		2	6.21																			
6006494		1	7																			
6006593		1	7																			
7812145		8	6.82																			
10264339	Clutch Housing	4	22	3560	19580	890	166	913	42													
24273609	X69F CVT Reverse	4	11.67	10832	31602	2708	29854	87099	7464	25076	73159	6269										
24276241	8L45 Input Gear C	1	8	23785	190280	23785	21260	170080	21260	13328	106624	13328										
24276243	8L90 Input Gear C	4	16	33154	132616	8289	35734	142936	8934	26040	104160	6510										
24282885	GFx O/D Planetary	2	9.5	60271	286287	30136	77486	368059	38743	86594	411322	43297										
26031034		8	6																			
26036315		4	11.5																			
26036318		2	7.05																			
26061142		4	0																			
26063969		2	5.25																			
26063970		2	5.25																			
26072123		2	5.25																			
26075238		6	11																			
26075532		4	0																			
26075811		4	9.7																			
26079997		8	9.75																			
26080951	K2XX Shift Actuato	8	9				16350	18394	2044	5406	6082	676										
26083774		4	0																			
26086230		4	10.91																			
26086252		4	10.5																			
26089885		2	8.02																			
26103560		1	0																			
26105301		6	8																			
26105382		8	8.25																			
	GMT610 Gear Shif	6	11	2853	5231	476	20469	37527	3412	23994	43989	3999										
26114621		8	13																			
26132123		1	0																			
26134166		1	6.33																			
26134538		2	10.5																			
26134543		2	10.5																			
26136479	CBR Pump Housin	4	21.15																			
26137092		4	0																			
26137534	CBR Pump Housin	4	21.15	47942	253493	11986	46041	243442	11510	45721	241750	11430										
26142142		2	13.23																			
28206461		2	4.6																			
28268864		6	12																			
28278634		6	12																			
28305401		2	4.6																			
38002170		2	5.8																			
38206298		6	12																			
40176001	T1xx Front Bearing	20	20.75	101640	105452	5082	64242	66651	3212	134670	139720	6734										
1L2W4224AA	P552 Bearing Cap	24	22.5																			
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HL1W4A028AA	Ford Cover 8.8	1	13.4	2777	37212	2777	2630	35242	2630													
HL1W4A028DA	Ford Cover 9.75	1	13.4	2991	40079	2991	5309	71141	5309	5910	79194	5910										
HL1W4C000EB	Torque Arm	2	23.21	6998	81212	3499	6976	80956	3488	3206	37206	1603										
			TOTALS:	296,803	1,183,044	92,617	326,517	1,322,439	108,046	369,945	1,243,205	99,756	0	0	0	0	0	0	0	0	0	0

TOTAL ALUMINUM MELTED BY MONTH:

MONTH	1053	1100	1106	TOTALS
January	0	919089	263954	1,183,044
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March	0	987085	256120	1,243,205
April				0
May				0
June				0
July				0
August				0
September				0
October				0
November				0
December				0
TOTAL:				**3,748,688**

TIMES FLUXED BY MONTH

MONTH	1053	1100	1106	TOTALS
January	0	22	11	83
February	0	27	11	95
March	0	30	8	95
April				0
May				0
June				0
July				0
August				0
September				0
October				0
November				0
December				0
TOTAL:				**273**

FLUX USAGE (lbs) / ALUMINUM MELTED

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May	31			
June	30			
July	31			
August	31			
September	30			
October	31			
November	30			
December	31			
TOTAL:				**2,160**