

7030 Ryburn Dr. Millington, TN Phone: (901) 873-5300 Fax: (901) 873-5301 <u>www.gohispeed.com</u>

June 4, 2025

NUCOR Melt Shop

Subject: May 2025 vibration survey

Below is a summary report for the Melt Shop monthly vibration survey that was performed on 06/02/25. Most of the machines surveyed were found to be in good condition except for the following:

QualiTest® uses a four-step rating system for defects.

<u>Class I:</u> Defect is present, but effect on reliability is not clear; no immediate action is required. Continue to normally monitor.

<u>Class II:</u> Defect (s) present that may cause problem in long term (2-6 months). Repair during normal maintenance scheduling. Continue to monitor.

<u>Class III</u>; Defect (s) present that may cause failure in short term (less than 2 months). This should be addressed as soon as practical, with a high maintenance priority. Increase monitoring frequency.

Class IV; Defect (s) present that makes continued reliability unpredictable, and possibility of secondary damage is high. Repairs should be made ASAP. An unscheduled shutdown should be considered for repairs

Hi-Speed Industrial Service tests and inspects industrial machinery and equipment and makes recommendations concerning maintenance and repairs based on its experience in the field of industrial repair and maintenance. The information contained herein is provided as an opinion only, not as a guaranty or warranty of the matters discussed herein.

As always, it has been a pleasure to serve NUCOR Steel Flowood-Jackson, MS. If there are any comments or questions, do not hesitate to contact us.

Sincerely,

ISO Certified Vibration Analyst, Category III

HI-SPEED
INDUSTRIAL SERVICE
Qualitiest Diagnostics

Cell: 901-486-4565

Email: kwilliam@gohispeed.com

Defects

Middle Caster Mold Water Pump

Vibration data shows issues in the pump. Data suggests looseness/wear of the pump bearings/fits. Impeller and other pump internals may also have wear. The pump will likely need attention soon. Rated as a **CLASS II** defect.

East Booster Pump

Pump was down this survey; however, the following still applies: Motor vibration data indicates defects are present in the motor bearings. Inspect motor as scheduling allows. Rated as a **CLASS III** defect.

Cooling Tower #1 Supply Pump

Pump has some elevated 1 x rpm DE vibration (horizontal and axial). For now, it is recommended to inspect pump coupling, alignment, and all pump fasteners as scheduling allows. Rated as a **CLASS II** defect.

Cooling Tower #4 Supply Pump

Pump data shows some signs of bearing defects/wear in the ODE pump bearing. Inspect pump as scheduling allows. Rated as a **CLASS III** defect.

Cooling Tower #5 Supply Pump

Pump has some elevated 1 x rpm axial vibration. For now, it is recommended to inspect couplings, alignment, and all pump fasteners as scheduling allows. Rated as a **CLASS II** defect.

Cooling Tower #6 Supply Pump

The pump vibration data still indicates that there is bearing wear, and possibly cavitation in the pump. Inspect ODE pump bearing. Ensure the pump has no inlet restrictions and is operating in the correct part of the curve. Impeller may have excessive wear. Rated as a **CLASS II** defect.

Spray Chamber Exhaust Fan

Data was not taken this month. If no actions have been taken, then the following likely still applies: Motor and fan both have high vibration again this survey. Belts could be slipping which is allowing the fan to operate at speeds near a resonance which causing high 1 x fan rpm vibration in the unit. High 1 x rpm vibration could also be structural issue and or fan imbalance. Inspect all motor base mounts/fasteners. Inspect fan for build-up and inspect belt tension soon. Rated as a **CLASS III** defect.

Middle Caster Oscillator Drive

Data was not taken this month. If no actions have been taken, then the following likely still applies: Overall vibration has increased in this unit. Unit has visible movement. Gear drive appears to be loose to the base. Inpsect all fasteners asap. Rated as a CLASS III defect.

Abbreviated Last Measurement Summary

Database: nucorja9.rbm Station: Melt Shop

	_		
MEASUREMEN	T POINT		
WCMWP	- WEST CASTER MOLD		
		OVERALL LEVEL	1K-20KHz
мон		.061 In/Sec	.269 G-s
MIH		.061 In/Sec .063 In/Sec .073 In/Sec	452 G-s
MIA		073 In/Sec	198 G-s
PIA		330 In/Sec	1 167 C-a
PIA		.339 In/Sec	1.107 G-S
POH		.311 In/Sec .319 In/Sec	1.012 G-S
POH		.319 In/Sec	.631 G-S
MCMWP	- MID CASTER MOLD		
		OVERALL LEVEL	1K-20KHz
MOH		.102 In/Sec	.490 G-s
MIH		.183 In/Sec .207 In/Sec .337 In/Sec	1.078 G-s
MIA		.207 In/Sec	1.971 G-s
PIA		.337 In/Sec	3.222 G-s
PIH		.247 In/Sec	2.618 G-s
POH		.228 In/Sec	3 120 G-s
1011		.220 111, 560	3.120 0 5
WBOSTRP	- WEST Booster PUM		
		OVERALL LEVEL .045 In/Sec	1K-20KHz
MOH		.045 In/Sec	.396 G-s
MIH		.042 In/Sec	.498 G-s
MIA		.048 In/Sec .123 In/Sec .084 In/Sec	.264 G-s
PIA		.123 In/Sec	1.422 G-s
PIH		.084 In/Sec	.887 G-s
POH		.186 In/Sec	2.411 G-s
TGG!!D 1 - TM	- EAST CASTER SPRA		0.5
ECSWP ILFT		OVERALL LEVEL	
мон		080 Tn/Sec	225 G-s
MIH		062 In/Sec	348 G-e
MIA		.080 In/Sec .062 In/Sec .117 In/Sec	.275 G-s
MCSWP 2LFT	- MID CASTER SPRAY		
		OVERALL LEVEL	
MOH		.094 In/Sec	.349 G-s
MIH		.081 In/Sec	.969 G-s
MIA		.081 In/Sec .096 In/Sec	.260 G-s
МССМБ ЛБ Ф	- WEST CASTER SPRA	V WD / DTCH /0'	2-Tun-25)
WCSWP 4RI	- WEST CASTER SPRA	OVERALL LEVEL	1K-20KHz
мон		.200 In/Sec	.539 G-s
MIH		.147 In/Sec	.565 G-s
MIA		.117 In/Sec	.676 G-s
ESERVOHYDP	- EAST SERVO Hyd P		
		OVERALL LEVEL	1K-20KHz
MOH		.050 In/Sec	.555 G-s
MIH		.080 In/Sec	1.809 G-s
PIV		.123 In/Sec	.927 G-s
WCEDWOUVDD	- WEST SERVO Hyd P	OTIMD (OT)_ Tun_25\
MOEKVOHIDP	- MEST SEKAO HÅG B		
1/0**		OVERALL LEVEL .112 In/Sec	710 C -
МОН		.112 IN/SEC	.219 G-s
MIH			.300 G-s
PIV		.167 In/Sec	1.436 G-s
SERVOHRECP	- SERVO Hyd RECIRC	PUMP (02	2-Jun-25)
	-	OVERALL LEVEL	
мон		.086 In/Sec	.376 G-s
MIH		.076 In/Sec	.870 G-s
MIU		.0,0 111,560	.570 G-S

PIV .159 In/Sec 1.332 G-s

2DEKRECIP	-	2ND	DECK	L&S	Hyd	RECIR	C PUM	(02-Jun-25	5)
								L 1K-20	
мон						087	In/Sec	.210) C-e
						145	In/Sec	210	
MIH						.145	In/Sec	.310 1.706	. G-8
PIV						.246	In/Sec	1.706	G-s
M2DECKHYDP	-	MIDI	OLE 2	ND D	ECK F	iyd PUI	MP	(02-Jun-25	5)
						OVERA	LL LEVEI	L 1K-20)KHz
MOH						.118	In/Sec	. 394	l G−s
MIH						138	In/Sec	.159	G-s
PIV								.019	
PIV						1.02/	III/ Sec	.013	, G-S
							_		
S2DECKHYDP	-	SOU	rh 2N	D DE	ск ну	d PUM	P	(02-Jun-25)
						OVERA	LL LEVEI	L 1K-20)KHz
MOH						.118	In/Sec	.105	G-s
MIH						.087	In/Sec	.105 1.123	G-s
PIV						501	In/Sec	5.095	G-8
						.501	111, 500	3.03	, , ,
1 011DT VD		ш- ,	~ 1	D				/00 T 05	
1SUPLYP	-	#1 2	suppi	y Pu				(02-Jun-25	
						OVERA	LL LEVEI	L 1K-20)KHz
MOH						.121	In/Sec	.154	l G−s
MIH						.171	In/Sec	.154 .155 .112	G-s
MIA						.209	In/Sec	.112	G-s
PIA						572	In/900	621	G-5
						.372	III/ Sec	. 621	. 6-5
PIH						. 394	In/Sec	. 417 . 455	G-S
POH						.224	In/Sec	. 455	G-s
2SUPLYP	-	#2 \$	Suppl	y Pu	mp			(02-Jun-25	5)
						OVERA	LL LEVEI	(U2-Jun-25 1K-20)KHz
MOH						.062	In/Sec	. 679	G-s
MIH						068	In/Sec	951	G-s
MIA						.000	In/Sec	. 951 . 432 . 371	
						.088	In/Sec	.432	: G-S
PIA						.204	In/Sec	.371	. G-s
PIH							- /~	400	
						.207	In/Sec	.425	, G-S
POH						.207 .242	In/Sec In/Sec	.429 1.448	G-S G-S
						.207 .242	In/Sec In/Sec	1.448	G-S G-S
РОН		#4 \$	Suppl	v Pu	crm	.207 .242	In/Sec	1.448	G-s
		#4 \$	Suppl	y Pu	mp	.242	In/Sec	1.448 (02-Jun-25	3 G-s 5)
POH 4SUPLYP	-	#4 \$	Suppl	y Pu	mp	.242	In/Sec	1.448 (02-Jun-25	3 G-s 5)
POH 4SUPLYP MOH	-	#4 \$	Suppl	y Pu		.242 OVERA:	In/Sec LL LEVEI In/Sec	1.448 02-Jun-25 1K-20 971.	3 G-s 5))KHz . G-s
POH 4SUPLYP MOH MIH	-	#4 \$	Suppl	y Pu		.242 OVERA: .041 .065	In/Sec LL LEVEI In/Sec In/Sec	1.448 02-Jun-25 1K-20 .971	G-s KHz G-s G-s
POH 4SUPLYP MOH	-	#4 \$	Suppl	y Pu		.242 OVERA .041 .065 .091	In/Sec LL LEVEI In/Sec In/Sec In/Sec	1.448 (02-Jun-25 1K-20 .971 .599	G-s KHz G-s G-s G-s G-s
POH 4SUPLYP MOH MIH	-	#4 \$	Suppl	y Pu		.242 OVERA .041 .065 .091	In/Sec LL LEVEI In/Sec In/Sec In/Sec	1.448 (02-Jun-25 1K-20 .971 .599	G-s KHz G-s G-s G-s G-s
POH 4SUPLYP MOH MIH MIA	-	#4 \$	Suppl	y Pu		.242 OVERA .041 .065 .091	In/Sec LL LEVEI In/Sec In/Sec In/Sec	1.448 (02-Jun-25 1K-20 .971 .599	G-s KHz G-s G-s G-s G-s
POH 4SUPLYP MOH MIH MIA PIA	-	#4 \$	Suppl	y Pu		.242 OVERA .041 .065 .091 .216	In/Sec LL LEVEI In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	1.448 (02-Jun-25 1K-20 .971 .599 .498 .797	G-s KHz G-s G-s G-s G-s G-s
POH 4SUPLYP MOH MIH MIA PIA PIH	-	#4 \$	Suppl	y Pu		.242 OVERA .041 .065 .091 .216	In/Sec LL LEVEI In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	1.448 (02-Jun-25 1K-20 .971 .599	G-s KHz G-s G-s G-s G-s G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH	-					.242 OVERA .041 .065 .091 .216	In/Sec LL LEVEI In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	1.448 (02-Jun-25 1K-20 .971 .599 .498 .797 .740	3 G-s 5) 0KHz 6-s 6-s 7 G-s 7 G-s 7 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH	-					.242 OVERA .041 .065 .091 .216 .172 .288	In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	1.448 (02-Jun-25 1K-20 .971 .599 .498 .797 .740 3.147	3 G-s 5) 0KHz 6-s 6-s 7 G-s 7 G-s 7 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH	-					.242 OVERA .041 .065 .091 .216 .172 .288 OVERA	In/Sec LL LEVEI In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec LL LEVEI	1.448 (02-Jun-25 1K-20 .971 .599 .498 .797 .740 3.147	G-s CHz G-s G-s G-s G-s G-s G-s G-s G-
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH	-					.242 OVERA .041 .065 .091 .216 .172 .288 OVERA .063	In/Sec LL LEVEI In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	1.448 (02-Jun-25 1K-20 .971 .599 .498 .797 .740 3.147 (02-Jun-25 1K-20 1.064	3 G-s 5) CHz 6-s 6-s 7 G-s 7 G-s 7 G-s 7 G-s 7 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH	-					.242 OVERA .041 .065 .091 .216 .172 .288 OVERA .063 .119	In/Sec	1.448 (02-Jun-25 1K-20 .971 .599 .498 .797 .740 3.147 (02-Jun-25 1K-20 1.064	3 G-s 5) 0KHz 6-s 6-s 7 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH	-					.242 OVERA041 .065 .091 .216 .172 .288 OVERA063 .119 143	In/Sec LL LEVEI In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	1.448 (02-Jun-25 1K-20 .971 .599 .498 .797 .740 3.147 (02-Jun-25 1K-20 1.064 .601	3 G-s 5) 0KHz 6-s 6-s 7 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH	-					.242 OVERA041 .065 .091 .216 .172 .288 OVERA063 .119 143	In/Sec LL LEVEI In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	1.448 (02-Jun-25 1K-20 .971 .599 .498 .797 .740 3.147 (02-Jun-25 1K-20 1.064 .601	3 G-s 3 G-s 3 G-s 4 G-s 5 G-s 6 G-s 7 G-s 7 G-s 7 G-s 8 G-s 7 G-s 8 G-s 7 G-s 8 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH MIA	-					.242 OVERA .041 .065 .091 .216 .172 .288 OVERA .063 .119 .143 .782	In/Sec	1.448 (02-Jun-25 1K-20 .971 .599 .498 .797 .740 3.147 (02-Jun-25 1K-20 1.064 .601	3 G-s 3 G-s 3 G-s 4 G-s 5 G-s 6 G-s 7 G-s 7 G-s 7 G-s 8 G-s 7 G-s 8 G-s 7 G-s 8 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH MIA PIA PIA PIH	-					.242 OVERA .041 .065 .091 .216 .172 .288 OVERA .063 .119 .143 .782 .331	In/Sec	1.448 (02-Jun-25 1K-20 .971 .599 .498 .797 .740 3.147 (02-Jun-25 1.064 .601 .535 .873	3 G-s 3 G-s 3 G-s 3 G-s 3 G-s 4 G-s 6 G-s 7 G-s 7 G-s 8 G-s 7 G-s 8 G-s 8 G-s 8 G-s 8 G-s 8 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH MIA PIA	-					.242 OVERA .041 .065 .091 .216 .172 .288 OVERA .063 .119 .143 .782 .331	In/Sec	1.448 (02-Jun-25 1K-20 .971 .599 .498 .797 .740 3.147 (02-Jun-25 1K-20 1.064 .601	3 G-s 3 G-s 3 G-s 3 G-s 3 G-s 4 G-s 6 G-s 7 G-s 7 G-s 8 G-s 7 G-s 8 G-s 8 G-s 8 G-s 8 G-s 8 G-s
POH 4SUPLYP MOH MIH MIA PIA POH 5SUPLYP MOH MIH MIA PIA PIH POH	-	#5 \$	Suppl	y Pu	mp	.242 OVERA .041 .065 .091 .216 .172 .288 OVERA .063 .119 .143 .782 .331	In/Sec	1.448 (02-Jun-25 1.599 .498 .797 .740 3.147 (02-Jun-25 1.064 .601 .535 .873	3 G-s 5) 0KHz 6-s 6-s 6-s 7 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH MIA PIA PIA PIH	-	#5 \$	Suppl	y Pu	mp	.242 OVERA: .041 .065 .091 .216 .172 .288 OVERA: .063 .119 .143 .782 .331 .428	In/Sec	1.448 (02-Jun-25 1.599 .498 .797 .740 3.147 (02-Jun-25 1.064 .601 .535 .873 1.003	3 G-s 5) 0KHz 6-s 6-s 7 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH MIA PIA PIH POH		#5 \$	Suppl	y Pu	mp	.242 OVERA .041 .065 .091 .216 .172 .288 OVERA .063 .119 .143 .782 .331 .428 OVERA	In/Sec	1.448 (02-Jun-25 1K-20 .971 .599 .498 .797 .740 3.147 (02-Jun-25 1.064 .601 .535 .873 1.003 .907	3 G-s 3 G-s 3 G-s 3 G-s 3 G-s 4 G-s 5 G-s 6 G-s 6 G-s 6 G-s 7 G-s 7 G-s 7 G-s 8 G-s 7 G-s 8 G-s 8 G-s 8 G-s 8 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH MIA PIA PIH POH 6SUPLYP		#5 \$	Suppl	y Pu	mp	.242 OVERA041 .065 .091 .216 .172 .288 OVERA063 .119 .143 .782 .331 .428 OVERA048	In/Sec LL LEVEI In/Sec	1.448 (02-Jun-25 1.599 .498 .797 .740 3.147 (02-Jun-25 1.064 .601 .535 .873 1.003 .907	3 G-s 3 G-s 3 G-s 3 G-s 3 G-s 4 G-s 6 G-s 6 G-s 7 G-s 7 G-s 7 G-s 8 G-s 7 G-s 7 G-s 8 G-s 8 G-s 8 G-s 8 G-s 8 G-s 8 G-s 9 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH MIA PIA PIH POH		#5 \$	Suppl	y Pu	mp	.242 OVERA041 .065 .091 .216 .172 .288 OVERA063 .119 .143 .782 .331 .428 OVERA048	In/Sec LL LEVEI In/Sec	1.448 (02-Jun-25 1.599 .498 .797 .740 3.147 (02-Jun-25 1.064 .601 .535 .873 1.003 .907	3 G-s 3 G-s 3 G-s 3 G-s 3 G-s 4 G-s 5 G-s 6 G-s 6 G-s 6 G-s 7 G-s 7 G-s 7 G-s 8 G-s 7 G-s 8 G-s 8 G-s 8 G-s 8 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH MIA PIA PIH POH 6SUPLYP	-	#5 \$	Suppl	y Pu	mp	OVERA: .041 .065 .091 .216 .172 .288 OVERA: .063 .119 .143 .782 .331 .428 OVERA: .048 .089	In/Sec	1.448 (02-Jun-25 1K-20 .971 .599 .498 .797 .740 3.147 (02-Jun-25 1.064 .601 .535 .873 1.003 .907	3 G-s 3 G-s 3 G-s 3 G-s 3 G-s 4 G-s 6 G-s 6 G-s 7 G-s 7 G-s 7 G-s 8 G-s 7 G-s 7 G-s 8 G-s 8 G-s 8 G-s 8 G-s 8 G-s 8 G-s 9 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH PIA PIH POH 6SUPLYP		#5 \$	Suppl	y Pu	mp	.242 OVERA041 .065 .091 .216 .172 .288 OVERA063 .119 .143 .782 .331 .428 OVERA048 .089 .074 .136	In/Sec	1.448 (02-Jun-25 1	3 G-s 3 G-s 3 G-s 3 G-s 3 G-s 3 G-s 4 G-s 5 G-s 6 G-s 6 G-s 6 G-s 7 G-s 7 G-s 7 G-s 8 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH POH 6SUPLYP MOH MIH MIA PIA PIH POH		#5 \$	Suppl	y Pu	mp	.242 OVERA041 .065 .091 .216 .172 .288 OVERA063 .119 .143 .782 .331 .428 OVERA048 .089 .074 .136	In/Sec	1.448 (02-Jun-25 1	3 G-s 3 G-s 3 G-s 3 G-s 3 G-s 4 G-s 5 G-s 6 G-s 6 G-s 6 G-s 7 G-s 7 G-s 7 G-s 8 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH POH 6SUPLYP MOH MIH POH 6SUPLYP		#5 \$	Suppl	y Pu	mp	OVERA: .041 .065 .091 .216 .172 .288 OVERA: .063 .119 .143 .782 .331 .428 OVERA: .048 .089 .074 .136 .160	In/Sec	1.448 (02-Jun-25 1K-20 .971 .599 .498 .797 .740 3.147 (02-Jun-25 1.064 .601 .535 .873 1.003 .907 (02-Jun-25 1K-20 .156 .135 .371 .234	3 G-s 3 G-s 3 G-s 3 G-s 3 G-s 3 G-s 4 G-s 5 G-s 6 G-s 6 G-s 7 G-s 7 G-s 7 G-s 8 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH POH 6SUPLYP MOH MIH MIA PIA PIH POH		#5 \$	Suppl	y Pu	mp	OVERA: .041 .065 .091 .216 .172 .288 OVERA: .063 .119 .143 .782 .331 .428 OVERA: .048 .089 .074 .136 .160	In/Sec	1.448 (02-Jun-25 1K-20 .971 .599 .498 .797 .740 3.147 (02-Jun-25 1.064 .601 .535 .873 1.003 .907 (02-Jun-25 1K-20 .156 .135 .371 .234	3 G-s 3 G-s 3 G-s 3 G-s 3 G-s 3 G-s 4 G-s 5 G-s 6 G-s 6 G-s 7 G-s 7 G-s 7 G-s 8 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH POH 6SUPLYP MOH MIH POH 6SUPLYP		#5 s	Suppl	y Pu	mp qm	OVERA: .041 .065 .091 .216 .172 .288 OVERA: .063 .119 .143 .782 .331 .428 OVERA: .048 .089 .074 .136 .160 .186	In/Sec	1.448 (02-Jun-25 1	3 G-s 5 G-s 5 G-s 6 G-s 6 G-s 7 G-s 7 G-s 8 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH POH 6SUPLYP MOH MIH POH 6SUPLYP		#5 s	Suppl	y Pu	mp qm	OVERA: .041 .065 .091 .216 .172 .288 OVERA: .063 .119 .143 .782 .331 .428 OVERA: .048 .089 .074 .136 .160 .186	In/Sec	1.448 (02-Jun-25 1	3 G-s 4 G-s 5 G-s 5 G-s 5 G-s 6 G-s 6 G-s 7 G-s 7 G-s 7 G-s 8 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH POH 6SUPLYP MOH MIH POH 6SUPLYP		#5 s	Suppl	y Pu	mp qm	OVERA: .041 .065 .091 .216 .172 .288 OVERA: .063 .119 .143 .782 .331 .428 OVERA: .048 .089 .074 .136 .160 .186 REVERS: OVERA:	In/Sec LL LEVEI In/Sec	1.448 (02-Jun-25 1	3 G-s 5) 6) 6) 6) 7 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH POH 6SUPLYP MOH MIH POH 6SUPLYP		#5 s	Suppl	y Pu	mp qm	OVERA: .041 .065 .091 .216 .172 .288 OVERA: .063 .119 .143 .782 .331 .428 OVERA: .048 .089 .074 .136 .160 .186 REVERS: OVERA:	In/Sec	1.448 (02-Jun-25 1	3 G-s 5) 6) 6) 6) 7 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH 5SUPLYP MOH MIH POH 6SUPLYP MOH MIH POH 6SUPLYP MOH MIH POH CBRA		#5 s	Suppl	y Pu	mp qm	OVERA: .041 .065 .091 .216 .172 .288 OVERA: .063 .119 .143 .782 .331 .428 OVERA: .048 .089 .074 .136 .160 .186 REVERS: OVERA: .023	In/Sec LL LEVEI In/Sec	1.448 (02-Jun-25 1	3 G-s 5) 6) 6) 6) 7 G-s
POH 4SUPLYP MOH MIH MIA PIA PIH POH SSUPLYP MOH MIH MIA PIA PIH POH 6SUPLYP MOH MIH MIA PIA PIH POH CBRA MOH		#5 s	Suppl	y Pu	mp qm	OVERA: .041 .065 .091 .216 .172 .288 OVERA: .063 .119 .143 .782 .331 .428 OVERA: .048 .089 .074 .136 .160 .186 REVERS: OVERA: .023 .027	In/Sec LL LEVEI In/Sec	1.448 (02-Jun-25 1	3 G-s 5) 6) 6) 6) 7 G-s 7 G-s 7 G-s 7 G-s 8 G-s 9 G-s

```
FIH
                             .018 In/Sec .048 G-s
.058 In/Sec .236 G-s
      FOH
CBID
       - CASTER BAGHOUSE ID FAN
                                       (02-Jun-25)
                            OVERALL LEVEL 1K-20KHz
                                            .089 G-s
.134 G-s
                             .053 In/Sec
      MOH
      MOV
                             .023 In/Sec
      MIH
                             .042 In/Sec
                                             .120 G-s
      MIV
                             .029 In/Sec
                                             .136 G-s
                             .015 In/Sec
      MIA
                                             .126 G-s
                             .037 In/Sec
                                              .616 G-s
      FIA
                                           1.438 G-s
      FIH
                             .057 In/Sec
                             .032 In/Sec
                                             .713 G-s
      FIV
                             .073 In/Sec 1.218 G-s .021 In/Sec 1.782 G-s .068 In/Sec 2.005 G-s
      FOH
      FOV
      FOA
                             .068 In/Sec
                                             2.095 G-s

    Furnace REVERSE AIR Fan

                                     (02-Jun-25)
FRAF
                            OVERALL LEVEL 1K-20KHz
      MOH
                             .050 In/Sec
                                             .192 G-s
                             .044 In/Sec
      MIH
                                            1.876 G-s
                                            1.521 G-s
      MIA
                             .029 In/Sec
      FIA
                             .052 In/Sec
                                             .469 G-s
                             .044 In/Sec
                                            1.723 G-s
      FIH
                                             .932 G-s
                             .039 In/Sec
      FOH
EFBHF - East Furnace Bag House Fan (02-Jun-25)
                            OVERALL LEVEL 1K-20KHz
                                            .369 G-s
                             .078 In/Sec
      MOH
                                            .459 G-s
.523 G-s
.987 G-s
      MIH
                             .079 In/Sec
                             .038 In/Sec
      MIA
                             .073 In/Sec
                             .073 In/Sec .987 G-s
.148 In/Sec 1.612 G-s
      FIA
      FIH
                             .116 In/Sec
                                            .971 G-s
      FOH
WFBHF - WEST Furnace Bag House Fan (02-Jun-25)
                            OVERALL LEVEL
                                            1K-20KHz
                             .138 In/Sec
      MOH
                                            .199 G-s
                             .171 In/Sec
                                             .279 G-s
      MIH
                                             .559 G-s
                             .087 In/Sec
      MIA
                                             .952 G-s
                             .114 In/Sec
      FIA
                             .167 In/Sec
      FIH
                                              .677 G-s
                                             1.930 G-s
      FOH
                             .135 In/Sec
MIDCHYDP - MIDDLE CASTER Hyd PUMP (02-Jun-25)
                            OVERALL LEVEL 1K-20KHz
      MOH
                             .098 In/Sec
                                             .496 G-s
      MIH
                             .072 In/Sec
                                            1.045 G-s
      PIH
                             .138 In/Sec
                                            1.353 G-s
SCHYDP - SOUTH CASTER Hyd PUMP (02-Jun-25)
                            OVERALL LEVEL 1K-20KHz
                                            .220 G-s
                             .084 In/Sec
      MOH
                                             .797 G-s
      MTH
                             .061 In/Sec
      PIH
                             .124 In/Sec
                                            1.256 G-s
```

Clarification Of Vibration Units:

Acc --> G-s RMS Vel --> In/Sec PK