

LOUISIANA DIVISION INDUSTRIAL HYGIENE DEPARTMENT

T/C NOISE MONITORING RECORD

Plant/Dept. Rail Road Employee Russell Bracken Employee I.D. #: 433-046887Date: 3-24-92 Job Classification: Labor - Bottom Poly CarContractor: Hebel Co. WASH AREAType Noise Sample: ☒ Personnel ☐ Excursion
☒ 8-Hour ☐ 12-HourIf personnel sample, describe task(s) performed during monitoring period including any unusual activities: opening top of hopper car, remove caps from outlets on hopper car
blowing out bottom tubes on hopper carWas hearing protection worn during monitoring? ☒ Yes ☐ NoType Worn: muffs 23/26 NRR Rating: 23/26Make and Model Dosimeter used: M-27 Serial Number: GW1120007Make and Model Calibrator used: Quest CA-12 Serial Number: 5090524Calibration Results: Before: 109.7 After: 109.6Run Time (Minutes): 8:05 485Monitoring Results: Dupont MK-2 Quest M-14, M-15, M-27

Dose % (80 dB Threshold)	LTL Dose % <u>82.8</u>
L avg dB (80 dB Threshold)	LTL L-Avg dB <u>88.5</u>
Dose % #2 (90 dB Threshold)	HTL Dose % <u>68.1</u>
L avg dB #2 (90 dB Threshold)	HTL L-Avg dB <u>87.1</u>
L max ₁ dB (1 second)	Max Level dB <u>121.8</u>
L Max Time	Peak Level dB <u>138.0</u>
L Max 2 dB (1/16 second)	LTL TWA dB <u>88.7</u>
Dose time (8-Hr projected)	HTL TWA dB <u>87.2</u>
> 115 dB (time)	<u>U.L. Time 2:46</u>

Sampled By: Alrepan

RESTRICTED FOR USE WITHIN DOW

BH:1/92

DO A 113344
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QUEST M-27 NOISE LOGGING DOSIMETER

NAME

Russell Bracken

I.D. #

433-04-6887

WORK STATION

COMMENTS

3-24-92

CAL LEVEL---49.8dB UNIT-----1

START TIME-00:00H:M END TIME---08:07H:M RUN TIME---8:04:53 PAUSE-----:02:41

PEAK LEVEL--138.0dB MAX LEVEL---121.8dB MIN LEVEL---52.5dB UPPER LIMIT---115dB

PEAK TIME--07:35H:M MAX TIME---07:34H:M MIN TIME---06:41H:M U.L. TIME---:02:46

EXCHANGE RATE---5dB --90dB THRESHOLD --80dB THRESHOLD 3dB EXCHANGE RATE

CRITERION-----90dB LAVG-----87.1dB LAVG-----88.5dB LRQ-----97.5dB

RANGE-----50dB TWA-----87.2dB TWA-----88.7dB SEL-----142.1dB

TIME CONSTANT -SLOW DOSE-----68.1% DOSE-----82.8% DOSE-----574%

WEIGHTING-----A 8hr DOSE-----67.4% 8hr DOSE-----82.0% 8hr DOSE-----568%

--90dB THRESHOLD

5dB EXCHANGE RATE

1 MIN HISTOGRAM

00:00	00	00	00	00	00dB	dB
00:05	00	88	00	00	00dB	+--- 56dB
00:10	00	00	61	80	52dB	+---+--- 69dB
00:15	73	64	56	87	67dB	+---+---+--- 77dB
00:20	90	80	84	75	91dB	+---+---+---+--- 86dB
00:25	92	80	88	00	60dB	+---+---+---+--- 84dB
00:30	00	69	69	80	86dB	+---+---+--- 78dB
00:35	71	87	88	79	84dB	+---+---+---+--- 84dB
00:40	86	89	88	65	94dB	+---+---+---+--- 88dB
00:45	83	00	00	77	80dB	+---+---+--- 77dB
00:50	76	78	74	75	75dB	+---+---+--- 76dB
00:55	76	82	81	92	87dB	+---+---+---+--- 86dB
01:00	93	96	84	63	00dB	+---+---+---+--- 89dB
01:05	00	70	92	95	87dB	+---+---+---+--- 89dB
01:10	89	91	90	71	75dB	+---+---+---+--- 87dB
01:15	61	85	80	88	95dB	+---+---+---+--- 88dB
01:20	94	64	63	91	57dB	+---+---+---+--- 86dB
01:25	00	93	82	00	00dB	+---+---+---+--- 83dB
01:30	00	72	52	82	78dB	+---+---+--- 75dB
01:35	89	00	74	91	76dB	+---+---+---+--- 84dB
01:40	64	71	00	74	00dB	+---+--- 67dB
01:45	00	00	65	66	00dB	+--- 59dB
01:50	57	63	77	73	00dB	+---+--- 69dB
01:55	82	72	00	00	81dB	+---+---+--- 76dB
02:00	69	00	89	84	88dB	+---+---+---+--- 84dB
02:05	79	84	70	79	87dB	+---+---+---+--- 82dB
02:10	79	94	95	74	61dB	+---+---+---+--- 88dB
02:15	00	82	75	00	00dB	+---+---+--- 73dB
02:20	00	00	00	00	00dB	dB
02:25	88	67	00	00	00dB	+---+---+--- 77dB
02:30	00	00	00	00	00dB	dB
02:35	00	00	00	00	00dB	dB
02:40	82	00	00	69	61dB	+---+--- 61dB

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02:50	00	00	00	00	00dB	dB
02:55	00	00	00	00	00dB	dB
03:00	00	00	00	00	00dB	dB
03:05	65	62	00	00	00dB	+--- 57dB
03:10	00	76	60	00	00dB	+----+-- 65dB
03:15	00	00	57	00	00dB	dB
03:20	00	63	00	00	00dB	+ 51dB
03:25	00	00	00	00	00dB	dB
03:30	00	00	00	00	65dB	+ 53dB
03:35	74	00	00	00	00dB	+----+ 62dB
03:40	00	00	00	00	00dB	dB
03:45	00	00	00	00	00dB	dB
03:50	00	00	73	67	82dB	+----+----+ 73dB
03:55	89	62	78	77	00dB	+----+----+ 80dB
04:00	00	00	00	00	00dB	dB
04:05	86	82	74	84	85dB	+----+----+ 83dB
04:10	79	72	71	00	00dB	+----+----+ 71dB
04:15	00	00	87	87	82dB	+----+----+ 82dB
04:20	00	00	00	00	00dB	dB
04:25	00	00	00	00	80dB	+----+---- 69dB
04:30	00	00	00	00	00dB	dB
04:35	00	00	00	00	00dB	dB
04:40	56	86	88	89	78dB	+----+----+ 85dB
04:45	64	00	00	00	00dB	+ 52dB
04:50	00	65	76	65	80dB	+----+----+ 73dB
04:55	00	00	00	00	00dB	dB
05:00	00	00	00	72	00dB	+----+ 61dB
05:05	00	00	00	56	81dB	+----+----+ 70dB
05:10	73	80	70	00	60dB	+----+----+ 72dB
05:15	00	00	64	00	00dB	+ 52dB
05:20	00	00	00	00	00dB	dB
05:25	00	00	00	00	00dB	dB
05:30	00	00	00	00	00dB	dB
05:35	00	00	00	00	65dB	+ 53dB
05:40	00	70	62	00	00dB	+----+ 60dB
05:45	00	60	52	00	54dB	+ 52dB
05:50	00	00	00	89	83dB	+----+----+ 80dB
05:55	57	65	62	00	00dB	+---- 58dB
06:00	78	77	65	109	103dB	+----+----+----+ 100dB
06:05	98	108	110	105	94dB	+----+----+----+ 105dB
06:10	109	107	80	69	61dB	+----+----+----+ 101dB
06:15	00	00	00	00	00dB	dB
06:20	00	00	00	00	00dB	dB
06:25	00	00	00	00	00dB	dB
06:30	00	00	00	00	00dB	dB
06:35	00	00	00	00	00dB	dB
06:40	00	00	00	00	00dB	dB
06:45	00	00	00	00	00dB	dB
06:50	00	00	00	00	00dB	dB
06:55	00	00	00	00	00dB	dB
07:00	00	00	00	00	00dB	dB
07:05	00	00	00	00	00dB	dB
07:10	00	00	00	00	00dB	dB
07:15	00	00	00	00	00dB	dB
07:20	00	67	95	79	00dB	+----+----+ 85dB
07:25	00	76	84	81	89dB	+----+----+ 82dB
07:30	67	110	84	112	113dB	+----+----+----+ 108dB
07:35	95	107	102	102	92dB	+----+----+----+ 102dB
07:40	66	71	52	00	00dB	+----+ 63dB
07:45	00	71	95	108	111dB	+----+----+----+ 104dB
07:50	102	102	106	104	00dB	+----+----+----+ 102dB
07:55	74	00	00	75	00dB	+----+---- 68dB
08:00	82	00	00	00	79dB	+----+----+ 74dB
08:05	00	00	00	00	00dB	dB

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--80dB THRESHOLD 5dB EXCHANGE RATE
1 MIN HISTOGRAM

00:00	60	00	54	00	00dB	+ 51dB
00:05	52	79	00	00	65dB	+----- 68dB
00:10	00	60	82	85	82dB	+-----+ 80dB
00:15	80	80	74	90	77dB	+-----+ 82dB
00:20	90	87	87	83	92dB	+-----+ 89dB
00:25	94	86	88	69	72dB	+-----+ 87dB
00:30	70	82	85	84	88dB	+-----+ 84dB
00:35	80	89	91	85	87dB	+-----+ 87dB
00:40	89	91	90	82	94dB	+-----+ 90dB
00:45	87	74	78	83	84dB	+-----+ 82dB
00:50	83	85	87	86	83dB	+-----+ 85dB
00:55	80	89	89	92	89dB	+-----+ 89dB
01:00	94	96	89	81	72dB	+-----+ 90dB
01:05	58	77	93	95	90dB	+-----+ 90dB
01:10	91	92	91	87	87dB	+-----+ 90dB
01:15	89	90	88	91	95dB	+-----+ 91dB
01:20	94	85	79	92	82dB	+-----+ 89dB
01:25	83	94	88	74	65dB	+-----+ 86dB
01:30	64	76	79	84	86dB	+-----+ 81dB
01:35	91	86	87	92	82dB	+-----+ 89dB
01:40	73	79	82	84	71dB	+-----+ 79dB
01:45	72	71	83	84	79dB	+-----+ 79dB
01:50	78	80	86	85	82dB	+-----+ 83dB
01:55	87	84	79	75	86dB	+-----+ 83dB
02:00	80	76	91	90	91dB	+-----+ 88dB
02:05	88	88	84	83	90dB	+-----+ 87dB
02:10	85	94	95	84	79dB	+-----+ 90dB
02:15	65	85	87	86	86dB	+-----+ 85dB
02:20	00	69	00	55	00dB	+----- 58dB
02:25	88	70	00	00	00dB	+-----+ 77dB
02:30	00	00	00	00	00dB	dB
02:35	00	00	00	00	00dB	dB
02:40	70	00	00	72	70dB	+----- 67dB
02:45	00	59	52	00	90dB	+-----+ 78dB
02:50	57	59	57	57	00dB	+--- 56dB
02:55	00	67	67	00	00dB	+-----+ 61dB
03:00	00	00	70	76	76dB	+-----+ 71dB
03:05	81	79	78	71	76dB	+-----+ 78dB
03:10	73	82	67	73	63dB	+-----+ 74dB
03:15	71	00	70	62	00dB	+-----+ 65dB
03:20	00	70	00	00	00dB	+----- 58dB
03:25	52	00	00	00	00dB	dB
03:30	64	73	67	60	77dB	+-----+ 71dB
03:35	82	58	59	76	57dB	+-----+ 73dB
03:40	66	61	00	72	00dB	+----- 64dB
03:45	59	62	61	77	69dB	+-----+ 69dB
03:50	70	78	80	78	86dB	+-----+ 80dB
03:55	91	80	81	80	75dB	+-----+ 84dB
04:00	80	82	80	80	82dB	+-----+ 81dB
04:05	90	87	85	89	90dB	+-----+ 88dB
04:10	89	87	86	77	79dB	+-----+ 85dB
04:15	69	72	90	90	86dB	+-----+ 86dB
04:20	78	80	81	75	75dB	+-----+ 78dB
04:25	77	80	80	80	85dB	+-----+ 81dB
04:30	80	00	00	00	00dB	+----- 69dB
04:35	00	00	00	56	71dB	+-----+ 60dB
04:40	76	89	91	91	86dB	+-----+ 88dB
04:45	83	76	71	71	73dB	+-----+ 76dB
04:50	76	82	80	77	82dB	+-----+ 80dB
04:55	00	64	69	54	00dB	+-----+ 60dB
05:00	62	62	71	77	73dB	+-----+ 71dB
05:05	70	78	78	78	85dB	+-----+ 79dB
05:10	81	85	82	72	79dB	+-----+ 81dB

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05:25	00	00	00	00	00dB
05:30	59	00	00	00	56dB
05:35	71	68	67	67	79dB
05:40	72	82	74	80	70dB
05:45	00	79	79	70	76dB
05:50	77	64	71	90	87dB
05:55	77	70	70	77	60dB
06:00	84	85	77	109	104dB
06:05	98	108	110	105	95dB
06:10	109	107	82	76	79dB
06:15	67	58	72	65	00dB
06:20	00	00	00	00	00dB
06:25	00	00	00	00	00dB
06:30	00	00	00	00	60dB
06:35	55	00	00	51	55dB
06:40	00	00	00	00	00dB
06:45	00	00	00	00	00dB
06:50	00	00	00	00	00dB
06:55	00	00	00	57	00dB
07:00	00	00	00	00	00dB
07:05	58	00	00	00	00dB
07:10	00	00	00	00	00dB
07:15	60	00	00	00	00dB
07:20	00	80	96	85	77dB
07:25	73	82	88	87	91dB
07:30	81	110	87	112	113dB
07:35	95	107	102	102	93dB
07:40	80	77	68	78	80dB
07:45	82	84	96	108	111dB
07:50	102	102	106	104	53dB
07:55	80	72	69	80	71dB
08:00	84	55	54	00	80dB
08:05	00	00	00	00	00dB

dB
+ 51dB
+-----+ 72dB
+-----+ 77dB
+-----+ 75dB
+-----+ 83dB
+-----+ 73dB
+-----+ 101dB
+-----+ 105dB
+-----+ 101dB
+-----+ 66dB
dB
dB
dB
+ 50dB
dB
dB
dB
dB
dB
dB
+-----+ 87dB
+-----+ 86dB
+-----+ 108dB
+-----+ 102dB
+-----+ 78dB
+-----+ 104dB
+-----+ 102dB
+-----+ 76dB
+-----+ 76dB
dB

3dB EXCHANGE RATE

1 MIN HISTOGRAM

00:00	73	68	70	65	66dB
00:05	71	83	72	70	75dB
00:10	68	73	85	87	84dB
00:15	84	83	81	92	82dB
00:20	96	88	90	85	94dB
00:25	96	88	91	77	79dB
00:30	79	84	86	89	91dB
00:35	84	91	92	88	90dB
00:40	91	92	94	84	96dB
00:45	90	79	81	87	88dB
00:50	85	88	87	87	85dB
00:55	84	90	90	93	91dB
01:00	95	96	89	83	79dB
01:05	72	83	94	96	91dB
01:10	92	92	91	87	88dB
01:15	89	90	90	91	96dB
01:20	94	85	83	92	83dB
01:25	83	97	89	80	78dB
01:30	76	83	82	89	87dB
01:35	92	86	88	94	85dB
01:40	80	84	82	86	78dB
01:45	79	79	84	85	81dB
01:50	82	82	87	85	82dB
01:55	90	84	81	81	89dB
02:00	82	80	91	90	91dB
02:05	88	89	85	87	92dB
02:10	87	94	96	85	81dB
02:15	77	87	88	87	86dB
02:20	75	78	73	73	72dB

+-----+ 69dB
+-----+ 77dB
+-----+ 83dB
+-----+ 86dB
+-----+ 92dB
+-----+ 91dB
+-----+ 88dB
+-----+ 90dB
+-----+ 93dB
+-----+ 86dB
+-----+ 86dB
+-----+ 90dB
+-----+ 92dB
+-----+ 92dB
+-----+ 90dB
+-----+ 92dB
+-----+ 90dB
+-----+ 91dB
+-----+ 86dB
+-----+ 90dB
+-----+ 83dB
+-----+ 82dB
+-----+ 84dB
+-----+ 86dB
+-----+ 89dB
+-----+ 89dB
+-----+ 92dB
+-----+ 86dB
+-----+ 75dB

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[illegible]

DO A 113049
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1:50	108	108	110	108	1200	
7:55	84	77	77	85	78dB	+-----+-----+ 82dB
08:00	90	73	72	68	88dB	+-----+-----+ 86dB
08:05	00	00	00	00	00dB	dB
08:10	00	00	00	00	00dB	dB

--90dB THRESHOLD 5dB EXCHANGE RATE

% TIME STATISTICAL DISTRIBUTION

50dB	--.00	--.00	--.00	--.20	--.60%	+	.8%
55dB	--.77	-1.02	-1.37	-1.61	-1.70%	----	6.4%
60dB	-1.92	-2.86	-2.87	-2.12	-1.97%	-----+	11.7%
65dB	-1.73	-1.55	-1.45	-1.55	-1.64%	----	7.9%
70dB	-1.72	-1.94	-1.90	-2.15	-2.40%	-----+	10.1%
75dB	-3.00	-3.82	-4.21	-4.36	-4.59%	-----+	19.9%
80dB	-4.63	-4.42	-4.42	-3.82	-2.72%	-----+	20.0%
85dB	-2.29	-2.26	-2.17	-1.93	-2.02%	-----+	10.6%
90dB	-2.32	-1.41	-1.09	--.87	--.73%	----	6.4%
95dB	--.78	--.74	--.61	--.41	--.28%	+-	2.8%
100dB	--.20	--.17	--.13	--.12	--.12%	+	.7%
105dB	--.12	--.10	--.14	--.10	--.14%	+	.6%
110dB	--.12	--.11	--.11	--.12	--.14%	+	.6%
115dB	--.12	--.14	--.12	--.09	--.08%	+	.5%
120dB	--.04	--.01	--.00	--.00	--.00%	+	.0%
125dB	--.00	--.00	--.00	--.00	--.00%	+	.0%

% DOSE STATISTICAL DISTRIBUTION

50dB	--.00	--.00	--.00	--.00	--.00%	+	.0%
55dB	--.00	--.00	--.01	--.01	--.02%	+	.0%
60dB	--.03	--.05	--.06	--.05	--.05%	+	.2%
65dB	--.05	--.05	--.06	--.07	--.09%	+	.3%
70dB	--.10	--.14	--.15	--.20	--.26%	+	.8%
75dB	--.37	--.55	--.70	--.83	-1.00%	+-	3.4%
80dB	-1.17	-1.28	-1.47	-1.46	-1.19%	----	6.5%
85dB	-1.16	-1.31	-1.45	-1.48	-1.77%	----	7.1%
90dB	-2.35	-1.64	-1.46	-1.33	-1.28%	-----	8.0%
95dB	-1.57	-1.73	-1.64	-1.25	-1.00%	-----	7.1%
100dB	--.82	--.83	--.74	--.74	--.85%	+-	3.9%
105dB	-1.04	--.98	-1.54	-1.33	-2.06%	----	6.9%
110dB	-2.04	-2.10	-2.52	-2.98	-4.11%	-----+	13.7%
115dB	-4.06	-5.51	-5.21	-4.78	-4.80%	-----+	24.3%
120dB	-2.81	-1.08	--.58	--.00	--.00%	+-	4.4%
125dB	--.00	--.00	--.00	--.00	--.00%	+	.0%

3dB EXCHANGE RATE

% TIME STATISTICAL DISTRIBUTION

50dB	--.00	--.00	--.03	--.66	-1.53%	+-	2.2%
55dB	-1.85	-1.86	-1.85	-1.83	-1.82%	-----	9.2%
60dB	-2.22	-3.02	-2.65	-2.03	-1.78%	-----+	11.7%
65dB	-1.63	-1.49	-1.40	-1.41	-1.51%	----	7.4%
70dB	-1.69	-1.82	-1.94	-2.37	-2.89%	-----+	10.7%
75dB	-3.45	-3.94	-4.25	-4.47	-4.59%	-----+	20.7%
80dB	-4.57	-4.45	-4.10	-3.38	-2.48%	-----+	18.9%
85dB	-2.01	-1.94	-1.88	-1.71	-1.67%	-----	9.2%
90dB	-1.56	-1.25	--.92	--.73	--.64%	+-	5.1%
95dB	--.55	--.51	--.40	--.33	--.25%	+-	2.0%
100dB	--.16	--.12	--.11	--.10	--.10%	+	.5%
105dB	--.11	--.12	--.09	--.09	--.09%	+	.5%
110dB	--.09	--.10	--.10	--.09	--.11%	+	.4%
115dB	--.10	--.11	--.10	--.07	--.09%	+	.4%
120dB	--.06	--.02	--.01	--.00	--.00%	+	.0%
125dB	--.00	--.00	--.00	--.00	--.00%	+	.0%

% DOSE STATISTICAL DISTRIBUTION

50dB	--.00	--.00	--.00	--.00	--.00%	+	.0%
55dB	--.00	--.00	--.00	--.00	--.00%	+	.0%
60dB	--.00	--.00	--.00	--.00	--.00%	+	.0%
65dB	--.00	--.00	--.00	--.00	--.01%	+	.0%
70dB	--.01	--.02	--.03	--.04	--.07%	+	.1%
75dB	--.11	--.16	--.22	--.29	--.37%	+	1.1%

DO A 113350
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85dB	--.66	--.80	--.98	-1.13	-1.38%	+-	4.9%
90dB	-1.63	-1.65	-1.53	-1.53	-1.69%	+-	8.0%
95dB	-1.84	-2.12	-2.12	-2.22	-2.13%	+-	10.4%
100dB	-1.75	-1.70	-1.85	-2.21	-2.71%	+-	10.2%
105dB	-3.74	-5.43	-5.25	-6.06	-8.12%	+-	28.6%
110dB	-9.92	14.33	18.26	21.16	29.36%	+-	93.0%
115dB	347.1	495.1	541.5	535.5	819.2%	+-	273.8%
120dB	693.8	317.5	18.93	16.02	10.97%	+-	147.0%
125dB	-2.18	--.91	--.00	--.00	--.00%	+-	3.0%

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