November 02, 2023 Assignment #: 1110264

Jenny Phelps
Richland County
597 Park Ave E
Mansfield, Ohio 44905-2848

Dear Jenny Phelps,

I conducted an industrial hygiene (IH) assessment at Richland County on November 01, 2023 to assess noise exposure levels.

- Seven samples exceeded the OSHA AL and ACGIH TLV, with five of these samples also exceeding the OSHA PEL.

Table 1 – Noise Monitoring Results summarizes the assessment results. My full recommendations to address the measured exposures are available in the Risk Reduction Recommendations section.

The BWC Division of Safety & Hygiene (DSH) provides occupational safety and health consulting services with an understanding employers will proactively respond to the recommendations in this report. As a true partnership, your participation ensures you maintain a high degree of control over the process and outcomes.

I will follow up with you November 8, 2023 to review the recommendations and discuss how our BWC team can help with developing/enhancing your injury/illness prevention programs. Thank you for using DSH's services to address your IH risk factor assessment needs.

Sincerely,

Benjamin Smigielski

Benjamin Smigielski
Industrial Safety Hygienist 4

Observations

All employees reported typical operations during the monitoring. The shift for most monitored samples lasted from approximately 8:30 a.m. to 4:30 p.m.

The monitored samples consisted of several rooms throughout the main building. Different rooms differ in terms of number of dogs present, so noise levels can vary significantly. This visit was done to get some baseline levels for the facility. Three samples were personal samples, and four were area samples. All samples were conducted for the entirety of the workers' shifts. No air monitoring was conducted on this day.

Hearing protection is currently required for all workers. This available hearing protection consists of Venturegear earmuffs (NRR = 24). Job rotation is utilized by workers. A hearing conservation program is not currently in place.

Results

Unless otherwise noted, I assume the samples are representative of typical worker exposures for the purposes of this report. I compared the results to currently applicable OELs such as the Occupational Safety and Health Administration (OSHA) Action Level (AL) and Permissible Exposure Limit (PEL), the American Conference of Governmental Industrial Hygienists' Threshold Limit Value (ACGIH-TLV®), and/or the National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limit (REL).

Noise
The ACGIH monitoring results indicate seven samples exceeded the TLV.

The OSHA monitoring results indicate seven samples exceeded the AL and five samples exceeded the PEL.

TABLE 1 – NOISE MONITORING RESULTS

Richland County — November 01, 2023

Name	Work Location/ Operation	Time Sampled (minutes)	Results compared to ACGIH TLV 85 dBA	Results compared to OSHA AL 85 dBA	Results compared to OSHA PEL 90 dBA
Steph	Main Kennel	423	93	90	89*
Bree	West Wing	425	93	88	87
Tristan	North Wing	422	94	90	90
Area**	West Wing	421	96	93	93
Area**	Main Kennel	421	95	92	92
Area**	North Wing	420	95	92	92
Area**	Quarantine	421	96	94	94

NOTE 1: OSHA's Occupational Noise Exposure Standard, 29 CFR 1910.95, requires noise monitoring results be made available to workers in the sampled areas. You should supply a copy of this table to affected workers. Employers must keep noise exposure measurements for two years (see 29 CFR 1910.95(m)(3)(i)).

NOTE 2: The results are representative of the times sampled and only reflect conditions as they existed on November 01, 2023. Individual exposures will fluctuate depending on such factors as products produced, process or material changes, workload, production downtime, and/or individual work practices. You should consider such variability when interpreting any exposure data.

*There is a ± 2 decibel error range for the dosimeters and the monitoring process.

****NOTE 3:** Area samples cannot be compared directly to Occupational Exposure Limits such as PELs and Action Levels. However, they can be useful tools in determining the average sound level in a given area during a given time and in selecting hearing protection devices.

OSHA Hearing Conservation Requirements:

- Results ≥ Action Level but ≤ PEL = Hearing Conservation program required; use of hearing protection voluntary but strongly recommended.
- Result > PEL = Hearing Conservation program required; use of hearing protections mandatory plus assessing feasibility of engineering noise controls is mandated.

ACGIH Hearing Conservation Requirements:

- Results ≥ TLV = Effective Hearing Conservation Program strongly recommended.

General Hearing Conservation information is available at:
OSHA Occupational Noise Exposure Topic Page and NIOSH Noise & Hearing Loss Prevention Topic Page.

TABLE 1A – INDIVIDUAL NOISE MONITORING RESULTS

Richland County November 01, 2023

Name	Work Location/ Operation	Time Sampled (minutes)	Results compared to ACGIH TLV 85 dBA	Results compared to OSHA AL 85 dBA	Results compared to OSHA PEL 90 dBA
Steph	Main Kennel	423	**93**	**90**	**89***

NOTE 1: OSHA's Occupational Noise Exposure Standard, 29 CFR 1910.95, requires noise monitoring results be made available to workers in the sampled areas. You should supply a copy of this table to affected workers. Employers must keep noise exposure measurements for two years (see 29 CFR 1910.95(m)(3)(i)).

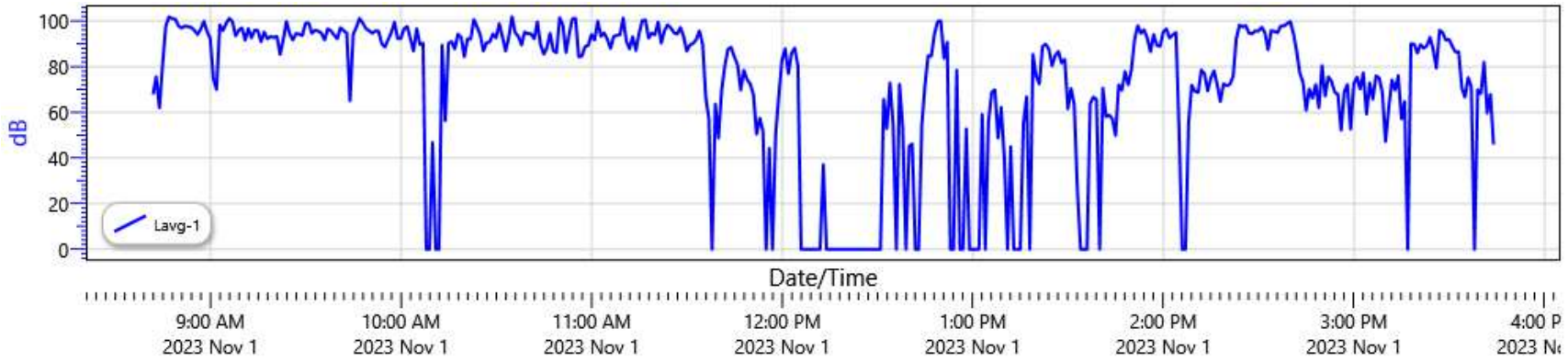
NOTE 2: The results are representative of the times sampled and only reflect conditions as they existed on November 01, 2023. Individual exposures will fluctuate depending on such factors as products produced, process or material changes, workload, production downtime, and/or individual work practices. You should consider such variability when interpreting any exposure data. There is a ± 2 decibel error range for the dosimeters and the monitoring process.

OSHA Hearing Conservation Requirements:

- Results ≥ Action Level but ≤ PEL = Hearing Conservation program required; use of hearing protection voluntary but strongly recommended.
- Result > PEL = Hearing Conservation program required; use of hearing protections mandatory plus assessing feasibility of engineering noise controls is mandated.

ACGIH Hearing Conservation Requirements:

- Results ≥ TLV = Effective Hearing Conservation Program strongly recommended.



These graphs show the noise exposure each worker received. Lavg indicates the average noise exposure for the sampling period. The peaks of the graphs show the periods of highest exposure. Conversely, the flat valleys at 0 dB show the noise level for this period was not high enough to exceed the monitor's threshold. The monitors do not consider noise below this level in the graph.

TABLE 1B – INDIVIDUAL NOISE MONITORING RESULTS

Richland County November 01, 2023

Name	Work Location/ Operation	Time Sampled (minutes)	Results compared to ACGIH TLV 85 dBA	Results compared to OSHA AL 85 dBA	Results compared to OSHA PEL 90 dBA
Bree	West Wing	425	**93**	**88**	87

NOTE 1: OSHA's Occupational Noise Exposure Standard, 29 CFR 1910.95, requires noise monitoring results be made available to workers in the sampled areas. You should supply a copy of this table to affected workers. Employers must keep noise exposure measurements for two years (see 29 CFR 1910.95(m)(3)(i)).

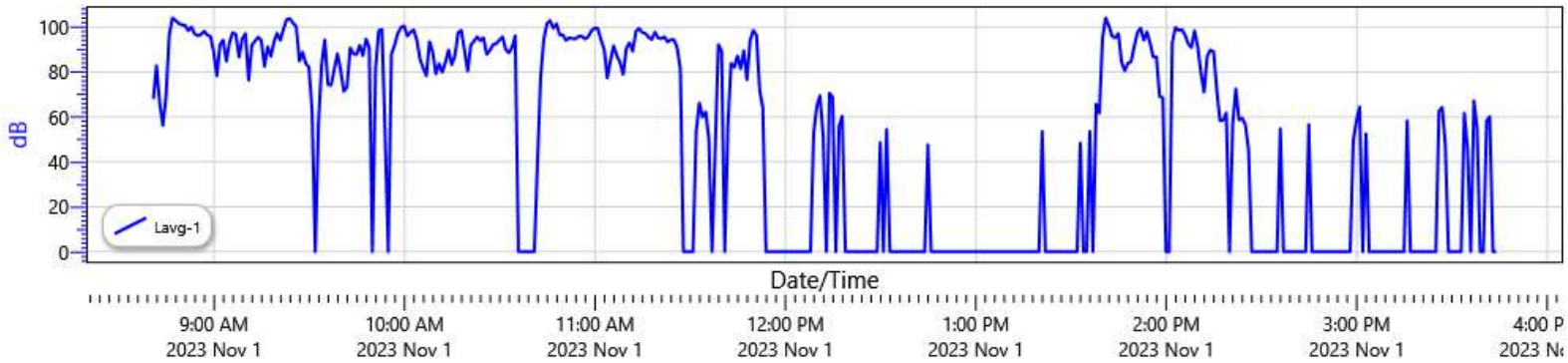
NOTE 2: The results are representative of the times sampled and only reflect conditions as they existed on November 01, 2023. Individual exposures will fluctuate depending on such factors as products produced, process or material changes, workload, production downtime, and/or individual work practices. You should consider such variability when interpreting any exposure data.
*There is a ± 2 decibel error range for the dosimeters and the monitoring process.

OSHA Hearing Conservation Requirements:

- Results ≥ Action Level but ≤ PEL = Hearing Conservation program required; use of hearing protection voluntary but strongly recommended.
- Result > PEL = Hearing Conservation program required; use of hearing protections mandatory plus assessing feasibility of engineering noise controls is mandated.

ACGIH Hearing Conservation Requirements:

- Results ≥ TLV = Effective Hearing Conservation Program strongly recommended.



These graphs show the noise exposure each worker received. Lavg indicates the average noise exposure for the sampling period. The peaks of the graphs show the periods of highest exposure. Conversely, the flat valleys at 0 dB show the noise level for this period was not high enough to exceed the monitor's threshold. The monitors do not consider noise below this level in the graph.

TABLE 1C – INDIVIDUAL NOISE MONITORING RESULTS

Name	Work Location/ Operation	Time Sampled (minutes)	Results compared to ACGIH TLV 85 dBA	Results compared to OSHA AL 85 dBA	Results compared to OSHA PEL 90 dBA
Tristan	North Wing	422	**94**	**90**	**90**

NOTE 1: OSHA's Occupational Noise Exposure Standard, 29 CFR 1910.95, requires noise monitoring results be made available to workers in the sampled areas. You should supply a copy of this table to affected workers. Employers must keep noise exposure measurements for two years (see 29 CFR 1910.95(m)(3)(i)).

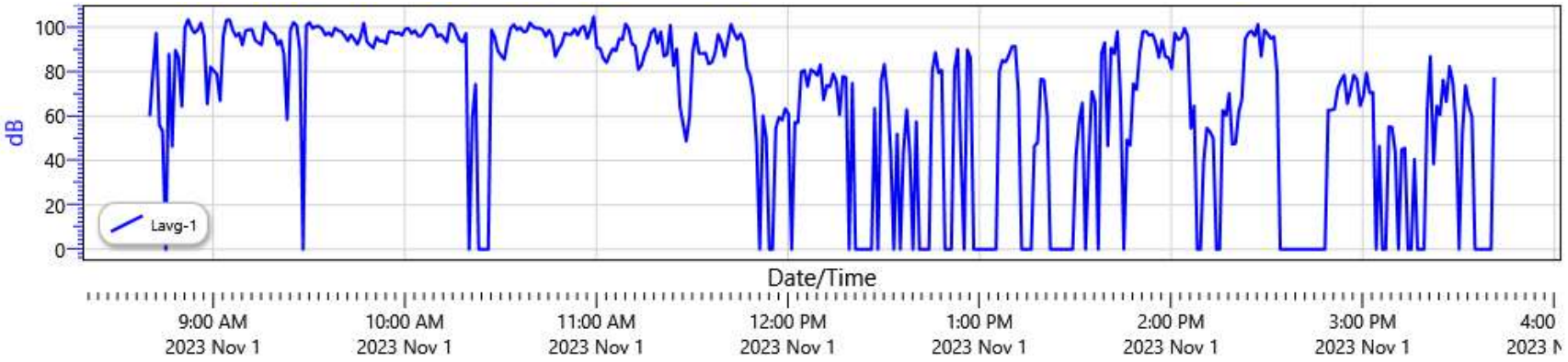
NOTE 2: The results are representative of the times sampled and only reflect conditions as they existed on November 01, 2023. Individual exposures will fluctuate depending on such factors as products produced, process or material changes, workload, production downtime, and/or individual work practices. You should consider such variability when interpreting any exposure data. There is a ± 2 decibel error range for the dosimeters and the monitoring process.

OSHA Hearing Conservation Requirements:

- Results ≥ Action Level but ≤ PEL = Hearing Conservation program required; use of hearing protection voluntary but strongly recommended.
- Result > PEL = Hearing Conservation program required; use of hearing protections mandatory plus assessing feasibility of engineering noise controls is mandated.

ACGIH Hearing Conservation Requirements:

- Results ≥ TLV = Effective Hearing Conservation Program strongly recommended.



These graphs show the noise exposure each worker received. Lavg indicates the average noise exposure for the sampling period. The peaks of the graphs show the periods of highest exposure. Conversely, the flat valleys at 0 dB show the noise level for this period was not high enough to exceed the monitor's threshold. The monitors do not consider noise below this level in the graph.

TABLE 1D – INDIVIDUAL NOISE MONITORING RESULTS

Name	Work Location/ Operation	Time Sampled (minutes)	Results compared to ACGIH TLV 85 dBA	Results compared to OSHA AL 85 dBA	Results compared to OSHA PEL 90 dBA
Area**	West Wing	421	96	93	93

NOTE 1: OSHA's Occupational Noise Exposure Standard, 29 CFR 1910.95, requires noise monitoring results be made available to workers in the sampled areas. You should supply a copy of this table to affected workers. Employers must keep noise exposure measurements for two years (see 29 CFR 1910.95(m)(3)(i)).

NOTE 2: The results are representative of the times sampled and only reflect conditions as they existed on November 01, 2023. Individual exposures will fluctuate depending on such factors as products produced, process or material changes, workload, production downtime, and/or individual work practices. You should consider such variability when interpreting any exposure data. There is a ± 2 decibel error range for the dosimeters and the monitoring process.

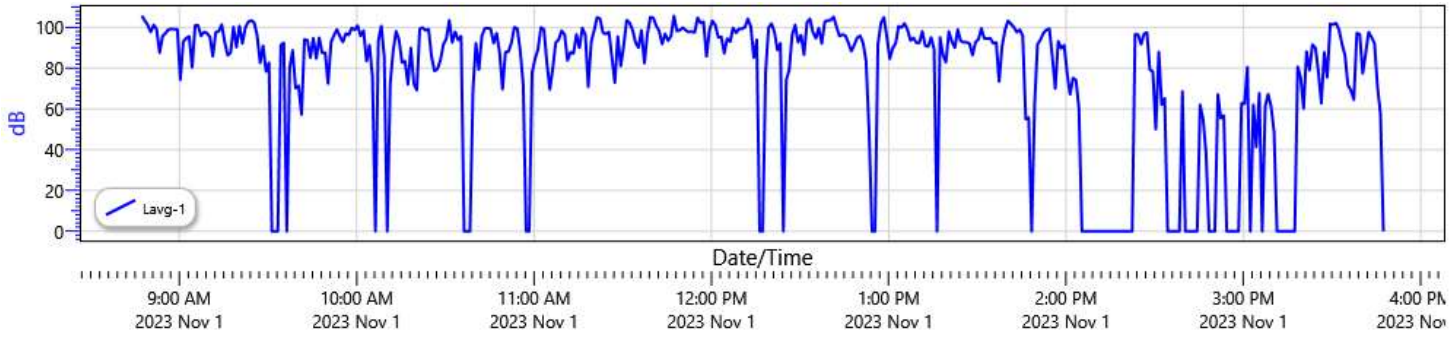
****NOTE 3:** Area samples cannot be compared directly to Occupational Exposure Limits such as PELs and Action Levels. However, they can be useful tools in determining the average sound level in a given area during a given time and in selecting hearing protection devices.

OSHA Hearing Conservation Requirements:

- Results ≥ Action Level but ≤ PEL = Hearing Conservation program required; use of hearing protection voluntary but strongly recommended.
- Result > PEL = Hearing Conservation program required; use of hearing protections mandatory plus assessing feasibility of engineering noise controls is mandated.

ACGIH Hearing Conservation Requirements:

- Results ≥ TLV = Effective Hearing Conservation Program strongly recommended.



These graphs show the noise exposure each worker received. Lavg indicates the average noise exposure for the sampling period. The peaks of the graphs show the periods of highest exposure. Conversely, the flat valleys at 0 dB show the noise level for this period was not high enough to exceed the monitor's threshold. The monitors do not consider noise below this level in the graph.

TABLE 1E – INDIVIDUAL NOISE MONITORING RESULTS

Name	Work Location/ Operation	Time Sampled (minutes)	Results compared to ACGIH TLV 85 dBA	Results compared to OSHA AL 85 dBA	Results compared to OSHA PEL 90 dBA
Area**	Main Kennel	421	**95**	**92**	**92**

NOTE 1: OSHA's Occupational Noise Exposure Standard, 29 CFR 1910.95, requires noise monitoring results be made available to workers in the sampled areas. You should supply a copy of this table to affected workers. Employers must keep noise exposure measurements for two years (see 29 CFR 1910.95(m)(3)(i)).

NOTE 2: The results are representative of the times sampled and only reflect conditions as they existed on November 01, 2023. Individual exposures will fluctuate depending on such factors as products produced, process or material changes, workload, production downtime, and/or individual work practices. You should consider such variability when interpreting any exposure data. There is a ± 2 decibel error range for the dosimeters and the monitoring process.

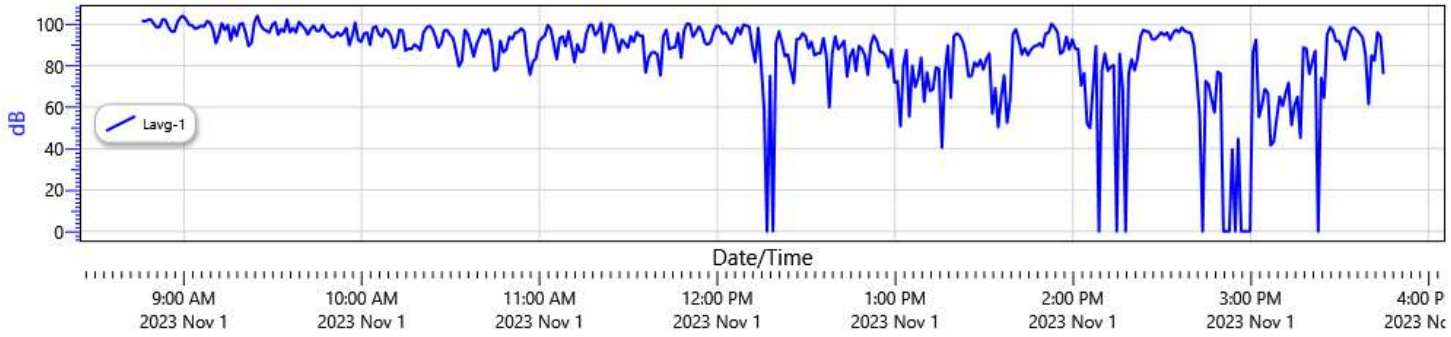
****NOTE 3:** Area samples cannot be compared directly to Occupational Exposure Limits such as PELs and Action Levels. However, they can be useful tools in determining the average sound level in a given area during a given time and in selecting hearing protection devices.

OSHA Hearing Conservation Requirements:

- Results ≥ Action Level but ≤ PEL = Hearing Conservation program required; use of hearing protection voluntary but strongly recommended.
- Result > PEL = Hearing Conservation program required; use of hearing protections mandatory plus assessing feasibility of engineering noise controls is mandated.

ACGIH Hearing Conservation Requirements:

- Results ≥ TLV = Effective Hearing Conservation Program strongly recommended.



These graphs show the noise exposure each worker received. Lavg indicates the average noise exposure for the sampling period. The peaks of the graphs show the periods of highest exposure. Conversely, the flat valleys at 0 dB show the noise level for this period was not high enough to exceed the monitor's threshold. The monitors do not consider noise below this level in the graph.

TABLE 1F – INDIVIDUAL NOISE MONITORING RESULTS

Name	Work Location/ Operation	Time Sampled (minutes)	Results compared to ACGIH TLV 85 dBA	Results compared to OSHA AL 85 dBA	Results compared to OSHA PEL 90 dBA
Area**	North Wing	420	**95**	**92**	**92**

NOTE 1: OSHA's Occupational Noise Exposure Standard, 29 CFR 1910.95, requires noise monitoring results be made available to workers in the sampled areas. You should supply a copy of this table to affected workers. Employers must keep noise exposure measurements for two years (see 29 CFR 1910.95(m)(3)(i)).

NOTE 2: The results are representative of the times sampled and only reflect conditions as they existed on November 01, 2023. Individual exposures will fluctuate depending on such factors as products produced, process or material changes, workload, production downtime, and/or individual work practices. You should consider such variability when interpreting any exposure data. There is a ± 2 decibel error range for the dosimeters and the monitoring process.

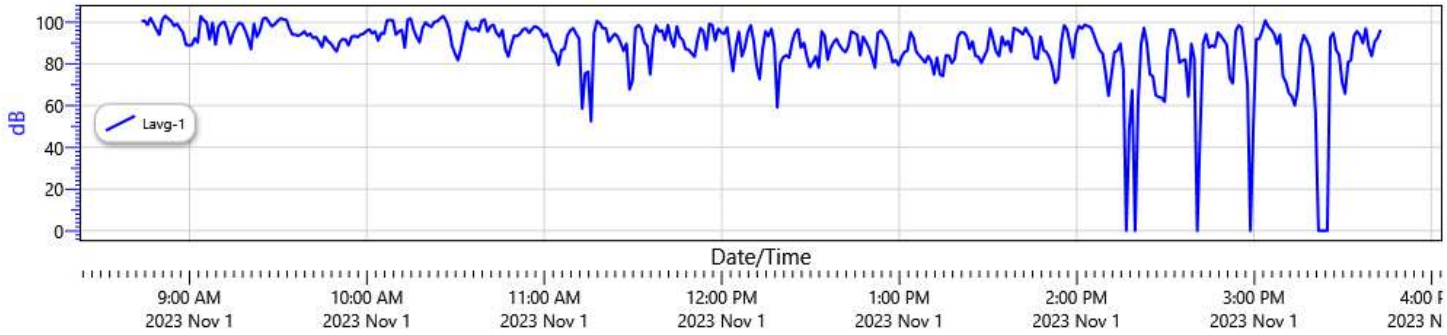
****NOTE 3:** Area samples cannot be compared directly to Occupational Exposure Limits such as PELs and Action Levels. However, they can be useful tools in determining the average sound level in a given area during a given time and in selecting hearing protection devices.

OSHA Hearing Conservation Requirements:

- Results ≥ Action Level but ≤ PEL = Hearing Conservation program required; use of hearing protection voluntary but strongly recommended.
- Result > PEL = Hearing Conservation program required; use of hearing protections mandatory plus assessing feasibility of engineering noise controls is mandated.

ACGIH Hearing Conservation Requirements:

- Results ≥ TLV = Effective Hearing Conservation Program strongly recommended.



These graphs show the noise exposure each worker received. Lavg indicates the average noise exposure for the sampling period. The peaks of the graphs show the periods of highest exposure. Conversely, the flat valleys at 0 dB show the noise level for this period was not high enough to exceed the monitor's threshold. The monitors do not consider noise below this level in the graph.

TABLE 1G – INDIVIDUAL NOISE MONITORING RESULTS

Name	Work Location/ Operation	Time Sampled (minutes)	Results compared to ACGIH TLV 85 dBA	Results compared to OSHA AL 85 dBA	Results compared to OSHA PEL 90 dBA
Area**	Quarantine	421	96	94	94

NOTE 1: OSHA's Occupational Noise Exposure Standard, 29 CFR 1910.95, requires noise monitoring results be made available to workers in the sampled areas. You should supply a copy of this table to affected workers. Employers must keep noise exposure measurements for two years (see 29 CFR 1910.95(m)(3)(i)).

NOTE 2: The results are representative of the times sampled and only reflect conditions as they existed on November 01, 2023. Individual exposures will fluctuate depending on such factors as products produced, process or material changes, workload, production downtime, and/or individual work practices. You should consider such variability when interpreting any exposure data. There is a ± 2 decibel error range for the dosimeters and the monitoring process.

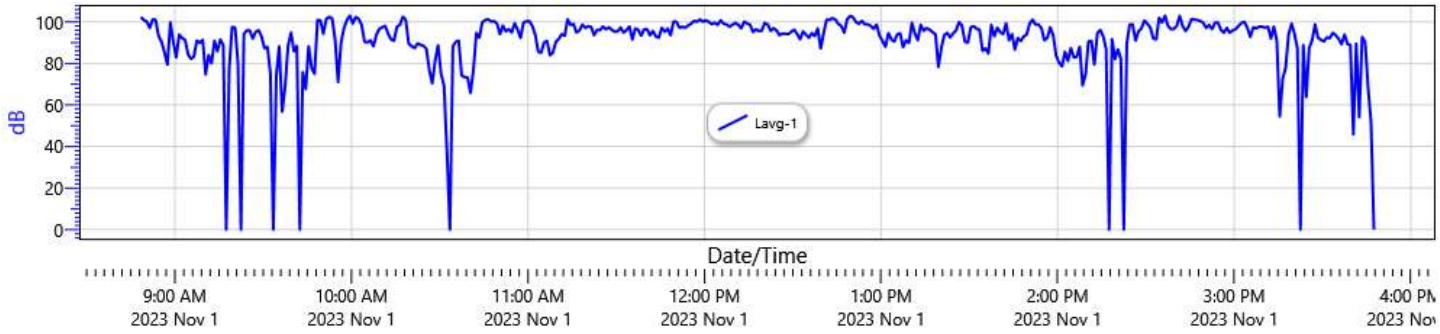
****NOTE 3:** Area samples cannot be compared directly to Occupational Exposure Limits such as PELs and Action Levels. However, they can be useful tools in determining the average sound level in a given area during a given time and in selecting hearing protection devices.

OSHA Hearing Conservation Requirements:

- Results ≥ Action Level but ≤ PEL = Hearing Conservation program required; use of hearing protection voluntary but strongly recommended.
- Result > PEL = Hearing Conservation program required; use of hearing protections mandatory plus assessing feasibility of engineering noise controls is mandated.

ACGIH Hearing Conservation Requirements:

- Results ≥ TLV = Effective Hearing Conservation Program strongly recommended.



These graphs show the noise exposure each worker received. Lavg indicates the average noise exposure for the sampling period. The peaks of the graphs show the periods of highest exposure. Conversely, the flat valleys at 0 dB show the noise level for this period was not high enough to exceed the monitor's threshold. The monitors do not consider noise below this level in the graph.

Risk Reduction Recommendations

We also discussed opportunities for reducing injury and illness risk factors and ideas for improving your safety and health processes.

Recommendation #: 2023-11-01

Observation:
The results indicate measured exposures in the following areas are above the OSHA PEL:
North Wing

- Tristan - Dosimeter 5

West Wing

- Area - Dosimeter 6

Main Kennel

- Area - Dosimeter 8

North Wing

- Area - Dosimeter 9

Quarantine

- Area - Dosimeter 10

Recommended Solution(s):
In addition to establishing a Hearing Conservation Program, you must also assess the feasibility of engineering noise controls. Engineering controls are generally physical changes to the workplace such as redesigning equipment to eliminate noise sources and constructing barriers that prevent noise from reaching workers.

When exposures exceed the PEL, hearing protective devices must be mandated in affected work areas.

Recommendation #: 2023-11-02

Observation:
The results indicate measured exposures in the following areas are at or above the OSHA AL:
Main Kennel

- Steph - Dosimeter 3

West Wing

- Bree - Dosimeter 4

North Wing
- Tristan - Dosimeter 5

West Wing
- Area - Dosimeter 6

Main Kennel
- Area - Dosimeter 8

North Wing
- Area - Dosimeter 9

Quarantine
- Area - Dosimeter 10

Recommended Solution(s):
Affected employees must be included in a continuing, effective Hearing Conservation Program (HCP) as prescribed by 29 CFR 1910.95. Your HCP must contain provisions for: Noise Monitoring, Audiometric Testing, Baseline and Annual Audiograms, Selection of Hearing Protection Devices, Education and Training, and Recordkeeping. Although the HCP is not required by the OSHA standard to be written, BWC highly recommends establishing a written program.

Recommendation #: 2023-11-03

Observation:
ACGIH has established a TLV for Audible Sound (Noise) of 85 dBA, as an 8-hour TWA. The results indicate measured exposures in the following areas are at or above the ACGIH TLV:
Main Kennel
- Steph - Dosimeter 3

West Wing
- Bree - Dosimeter 4

North Wing
- Tristan - Dosimeter 5

West Wing
- Area - Dosimeter 6

Main Kennel

- Area - Dosimeter 8

North Wing
- Area - Dosimeter 9

Quarantine
- Area - Dosimeter 10

Recommended Solution(s):
A hearing conservation program is recommended when workers are exposed to noise at or above the TLV®. Key program elements include exposure monitoring, implementation of noise controls, employee training, audiometric testing, use of hearing protection devices, recordkeeping, and program evaluation.

Recommendation #: 2023-11-04

Observation:
For workers that exceed the OSHA Action Level for noise, a hearing conservation program must be established.

Recommended Solution(s):
The hearing conservation standard requires employers to monitor employees' noise exposure to identify those who are exposed to noise at or above the 85 dB(A) action level. Audiometric testing and hearing protection must be made available to all employees exposed to noise at or above the action level.

A link to BWC's written safety program templates, including one on hearing conservation, can be found here: https://info.bwc.ohio.gov/wps/portal/gov/bwc/for-employers/safety-and-training/safety-video-library/Written-Safety-Program-Templates

Recommendation #: 2023-11-05

Observation:
During our meeting we discussed that your safety programs were not implemented by management, or they needed to be updated.

Recommended Solution(s):
Consider using our sample safety program templates to develop your site-specific programs. You can access our templates at;
https://info.bwc.ohio.gov/wps/portal/gov/bwc/for-employers/safety-and-training/safety-video-library/Written-Safety-Program-Templates

We specifically discussed the hearing conservation program.

Recommendation #: 2023-11-06

Observation:
Employees must be notified of these monitoring results.

Recommended Solution(s):
Provide employees in the areas sampled and others in the same work areas with a copy of the information in this report including the result table(s).

ATTACHMENT A – NOISE SAMPLING METHODS

I collected full-shift samples using TSI QUEST™ Edge 5 noise dosimeters.

TSI QUEST™ Edge 5 noise dosimeters are calibrated for this survey before and after use with a NIST-traceable acoustic calibrator. The dosimeters measure all continuous, intermittent, and impulsive sound levels from 80 dB to 130 dB according to the following parameters, with an error range of ± 2 decibels:

Exposure Limit	Frequency Weighting	Response Factor	Threshold Level	Criterion Level	Exchange Rate
OSHA Action Level	A	slow	80 dB	90 dB	5 dB
OSHA PEL	A	slow	90 dB	90 dB	5 dB
ACGIH TLV	A	slow	80 dB	85 dB	3 dB

There is growing evidence noise exposure with simultaneous chemical exposure to certain solvents, metals, and carbon monoxide (including CO from cigarette smoking) can increase the risk for developing noise-induced hearing loss. For these reasons, we recommend a conservative approach to hearing protection. We recommend you mandate effective hearing protection for any worker with potential noise exposure ≥80 dBA-TWA when ototoxic chemical exposure also occurs. The use of data from a one-day survey to assert or refute the potential for developing noise-induced hearing loss over a working lifetime should be done with extreme caution, and then only by someone trained in the occupational health sciences. OSHA and NIOSH have published a Safety and Health Bulletin with recommended practices to prevent hearing loss caused by ototoxins and noise exposure.

ATTACHMENT C - ABBREVIATIONS & DEFINITIONS

ACGIH®- American Conference of Governmental Industrial Hygienists, which develops and publishes Threshold Limit Values® (see below), recommends occupational exposure limits for hundreds of chemical substances and physical agents.

Action Level – Exposure limits used by OSHA and NIOSH to express a health or physical hazard. They indicate the level of a harmful or toxic substance/activity which generally require medical surveillance, increased industrial hygiene monitoring, and/or biological monitoring.

dBA - A-scale decibel filter which covers the full audible range (20 Hz to 20 kHz) and responds like the human ear at the lower sound levels.

NIOSH - The National Institute for Occupational Safety and Health is part of the Centers for Disease Control (CDC). NIOSH conducts research on health and safety concerns, tests and certifies respirators, and trains occupational health and safety professionals.

NRR - Noise Reduction Rating is a measure used to establish the effectiveness of hearing protection devices to decrease noise exposures.

OEL - An occupational exposure limit refers to an upper limit of exposure to hazards. Organizations such as NIOSH, OSHA, ACGIH and others establish OELs.

OSHA - US Occupational Safety and Health Administration, part of the US Department of Labor.

Permissible Exposure Limit (PEL) - An occupational exposure limit published and enforced by OSHA as a legal standard.

Time-Weighted Average Sound Level (TWA) - Is a worker's average exposure to occupational noise over an 8-hour work shift.

Threshold Limit Value (TLV®) - A time-weighted average concentration at which most people can work consistently for 8 hours a day, day after day, with no harmful effects. ACGIH annually publishes a table of these values and precautions.