FICTIONAL TRAINING REPORT - NOT A CLIENT ASSESSMENT

# Occupational Noise Exposure Assessment

RPT-NOISE-001 | Version 1.0
Fictional survey: October 20, 2026 | Report issued: October 26, 2026

## 1. Purpose and scope

This original teaching report concerns a fictional general-industry workshop, three worker-coded records and routine daytime work on one date. It is not a real client assessment, a health diagnosis, an official agency report or a statement of complete workplace compliance.

**Assessment question:** What do these records support about the evaluated work, the stated noise criteria and appropriate follow-up?

## Summary of findings

**W-01 / complete record.** 480 monitored minutes. The hearing-conservation action level is reached and the NIOSH recommendation is exceeded. The separate OSHA PEL channel is below its 100% reference.

**W-02 / partial record.** 240 monitored minutes. Captured dose already raises concern. The remaining four hours are unknown; no complete-shift exposure value is accepted in this report.

**W-03 / held record.** 480 monitored minutes, but the post-check fails the fictional instrument criterion. Accepted exposure values are withheld pending investigation and a decision on repeat monitoring.

## Reading this report

Check the methods and quality record before interpreting the numbers. Keep accepted, partial and held evidence distinct. Review the limitations before extending a finding to other workers, days or conditions.

## 2. Methods and configuration

For the example, personal microphones are assumed to have been positioned on the exposed shoulder with a suitable windscreen; task times and configuration records are supplied as teaching inputs. W-01 covers 08:00-16:00. W-02 covers 08:00-12:00 only: two hours of machining and two hours of fabrication. Later work was not documented. W-03 covers 08:00-16:00 but fails its post-check. The simplified calculation holds each task level constant.

| Channel | Criterion | Exchange | Threshold |
|---|---|---|---|
| OSHA hearing conservation | 90 dBA | 5 dB | 80 dBA |
| OSHA PEL channel | 90 dBA | 5 dB | 90 dBA |
| NIOSH REL comparison | 85 dBA | 3 dB | 80 dBA |

All three channels use A weighting and slow response. No hearing-protector attenuation is subtracted. Task levels are held constant in the simplified teaching model. The instrument names and records are fictional.

## 3. Instrument quality record

The fictional instrument manual uses a 94.0 dB, 1 kHz acoustic check and a pre/post difference no greater than 0.5 dB for acceptance in this exercise. This is a teaching rule, not an OSHA-prescribed universal tolerance. Post-checks are retained before any adjustment. Field checks do not replace appropriate periodic instrument calibration or establish the quality of every other part of an assessment.

| Instrument / record | Pre | Post | Change | Disposition |
|---|---|---|---|---|
| N-01 / area | 94.0 | 94.2 | +0.2 | Accepted for this example |
| D-01 / W-01 | 94.0 | 94.2 | +0.2 | Accepted for this example |
| D-02 / W-02 | 94.0 | 94.1 | +0.1 | Check accepted; coverage partial |
| D-03 / W-03 | 94.0 | 95.1 | +1.1 | HOLD: failed post-check |

All check readings and differences are in dB. W-03 fails the fictional acceptance rule. Its affected exposure values remain withheld. A later instrument adjustment does not establish validity of the earlier record.

## 4. W-01: complete personal record

| Task | Teaching level | Duration |
|---|---|---|
| Machining | 94 dBA | 2 hours |
| Fabrication | 88 dBA | 2 hours |
| Assembly | 82 dBA | 3 hours |
| Break room | 75 dBA | 1 hours |

| Channel | Dose | 8-hour TWA | Comparison |
|---|---|---|---|
| OSHA hearing conservation | 74.8% | 87.9 dBA | Above 50% action level |
| OSHA PEL channel | 43.5% | 84.0 dBA | Below 100% PEL reference |
| NIOSH REL comparison | 268.8% | 89.3 dBA | Above 100% REL reference |

The three TWAs use different calculation bases; they are not averaged together. The PEL-channel comparison does not cancel the hearing-conservation finding or the NIOSH prevention comparison. Dose is not a probability of hearing loss.

## 5. Partial and held records

W-02: the captured 240-minute doses are OSHA hearing conservation: 62.5%, OSHA PEL channel: 43.5%, NIOSH REL comparison: 250.0%. No full-shift TWA or projected full-shift dose is accepted. The remaining four hours are unknown, not assigned zero exposure. The captured dose already raises concern.

**W-03: accepted exposure values WITHHELD.** Failed post-check retained: 94.0 to 95.1 dB. Investigate the affected record and need for repeat monitoring.

## 6. Supporting area readings

Machining 94 dBA; fabrication 88 dBA; assembly 82 dBA; break room 75 dBA. These fictional stable readings describe locations and conditions. They help locate sources; they do not replace personal time-at-task evidence.

## 7. Limitations

These are three teaching records, not a statistical exposure distribution for the workforce. No expanded measurement uncertainty or confidence bound is supplied. A pre/post difference alone does not quantify overall uncertainty.

The evaluated routine shift does not represent overtime, cleaning, unusual production, other crews or future conditions. W-02 has incomplete temporal coverage. W-03 has an unresolved instrument-quality exception.

Area measurements describe their locations and stated conditions. They are not substituted for full-shift personal records. No protector attenuation is deducted. High-peak/impulse characterization, audiometry, clinical effects and other exposure agents are outside this report.

The criteria shown are federal general-industry noise bases and a distinct NIOSH recommendation. Construction, State Plan additions and other applicable obligations require separate scope review.

## 8. Recommended follow-up

| Item / role | Next evidence or decision |
|---|---|
| Program and communication / Site safety lead | Address applicable hearing-conservation needs for the represented work; communicate the qualified findings to affected workers through the employer process. |
| W-02 coverage / Exposure assessor | Establish the remaining work and obtain appropriate additional exposure evidence. Retain the concern already shown by the captured dose. |
| W-03 quality / Exposure assessor | Retain the failed check, investigate the instrument and affected record, and determine the need for repeat monitoring. Do not validate it by later adjustment alone. |
| Control response / Operations + engineering | Evaluate feasible source reduction and engineering controls with worker input; maintain appropriate interim protection and verify the effect of implemented changes. |

Recommendations are not completed controls. The responsible employer/assessor sets action dates, appropriate interim measures and verification criteria. Confidential clinical information stays in its separate process.

## Technical appendix and primary references

Dose = 100 x sum(C/T); T = 8 x 2^((criterion - level)/exchange) hours. Exclude levels below the channel threshold. Eight-hour TWA = criterion + exchange x log2(dose/100). C is time at a level. W-02 uses only documented monitored time.

OSHA - 29 CFR 1910.95

OSHA - different hearing-conservation and PEL thresholds

NIOSH - Understand Noise Exposure

Source check: October 26, 2026. Original fictional scenario; AI-assisted development. Independent technical and learning validation pending. Developed by Todd Jerome Jenkins, MS, CSP.