Part 2:
Noise Assessments

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But first, a disclaimer ….

- Disclaimer – the views expressed in this article are those of the author(s) and do not necessarily reflect the official policy or position of the Department of the Navy, Department of Defense or the United States Government

Noise Assessments

- Step #1 - Information gathering
  - Interview personnel
  - Perform a walk-through

Noise Assessments

- Interview personnel
  - Operations performed
  - Frequency & duration of operations
  - Type of equipment used
  - Materials involved
  - Hearing protection used & NRRs

Noise Assessments

- Perform a walk-through of work areas
  - Equipment present
  - Location of equipment/processes
  - Diagram the work area
  - Processes performed by other work areas
  - Observations on hearing protection use

Noise Assessments

- Step #2 – Define the SEGs
  - SEG: Similar Exposure Group

Noise Assessments

- Step #3: Review Our Data
  - Is the data relevant?
  - Do we need to collect more data?

Noise Assessments

- Step #4: Collecting Noise Data
  - Characterize 8-hour TWA exposures
    - Noise dosimetry
    - Sound pressure level readings

Noise Assessments

- Step #5: Data Analysis
  - Now we have our data……
  - What do we do with it?
  - How do we interpret it?

Noise Assessments

- Determine descriptive statistics to use
  - Range
  - Mean
  - Standard deviation
  - 95th Percentile
  - Probability of Non-Compliance

Noise Assessments

- Run the statistics
- Review the results
- Make a determination for the need of controls

Data Set Examples

Metal Engraving

Data Set #1

N	Range (dBA)	Mean (dBA)	SD	95th PCTL (dBA)	PN%
6	73-81	78	2.9	82	0.6
Data Points:	73	76	77	79	80	81

Data Set #2

N	Range (dBA)	Mean (dBA)	SD	95th PCTL (dBA)	PN%
6	73-83	79	3.9	85	5.1
Data Points:	73	76	77	79	83	83

Data Set Examples

Woodworking (Sawing)

N	Range (dBA)	Mean (dBA)	SD	95th PCTL (dBA)	PN%
12	85-94	90	2.8	95	95
Data Points:	85 85 87 88 88 89 89 90 90 91 92 93 93 93 94				

Data Set Examples

Metal Grinding

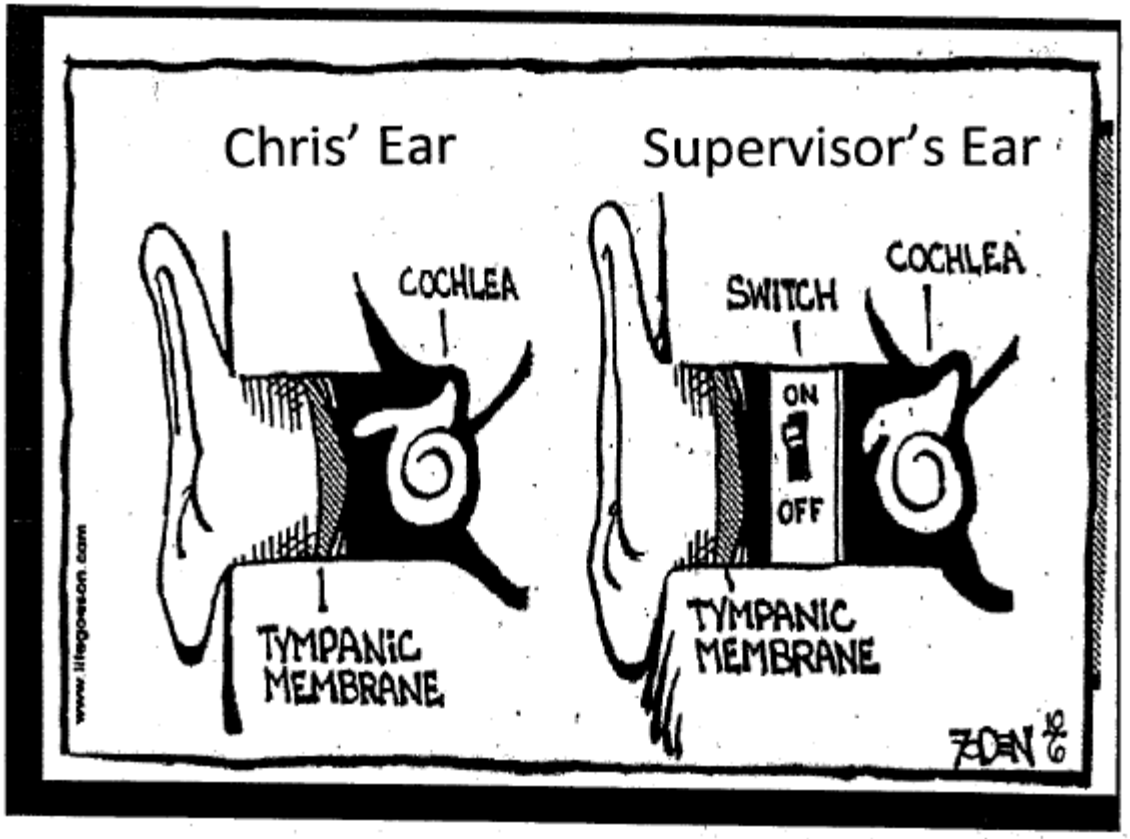
N	Range (dBA)	Mean (dBA)	SD	95th PCTL (dBA)	PN%
7	98-102	100	1.5	102	>99.9
Data Points:	98 98	99 99	100	101 102	

Data Set Examples

Abrasive Blasting
(inside a blasting booth)

N	Range (dBA)	Mean (dBA)	SD	95th PCTL (dBA)	PN%
12	102-112	109	2.7	113	>99.9

Data Points:	102	106	106	108	108	109	109	110	110	111	111	112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