# T K Group, Inc.

# NEWSLETTER 3rd Quarter-2006

VOLUME 20 ISSUE 3

# Persistent and Non-Persistent Test Outcomes

Three years ago, T K Group initiated a transition to a new reporting format, in part to address new reporting requirements mandated under the current Recordable Rule. With the new report format came positive response and valued user feedback which resulted in the format's current configuration.

Initial users of the new report format no doubt paid special attention to three reports termed *Actionable*: the 10 dB STS List*ing*, the *Potential Recordable Listing*, and the *Medical Referral Listing. Actionable* implies that test outcomes on the report require specific follow-up on your part to satisfy regulatory compliance requirements associated with 29 CFR 1910.95 (the OSHA Noise Standard) and CFR 1904 (Recording and Reporting of Occupational Injuries and Illness). Specific to the 10 dB STS Listing and Potential Recordable listings, employees who sustained a *previously* reported shift event are also listed to indicate if a previously reported shift event is persistent or non-persistent on the current test. This is done for three reasons:

1) A significant nuance to the Recordable Rule stipulates the "lining-off" of *nonpersistent* Recordable shift events. Example: If a confirmed Recordable event was sustained in 2005, but a subsequent test (e.g. the

2006 annual test) indicates a non-persistent 2005 shift event, the 2005 event may be removed from the 2005 OSHA 300 log. As is sometimes the case, some elect, neglect, or forget to retest 10 dB STS and/or Recordable events or do not address the event by way of a requesting a Work Relatedness Determination (which may deem the shift event non-work related). Fast forward one year to the next testing cycle. Based on our experience, we know that 50 % of initial STS indications are repealed upon retest (false positive). This is due to the inherent test variability associated with audiometric

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T K Group is conducting a CAOHC Certification and Recertification course on January 3rd, 4th, and 5th, 2007. If you wish to participate, please contact Beth Minnick at (815) 964-5445

# A Review of OSHA Recordable Follow-Up Actions

To qualify as a potential OSHA Recordable hearing loss event, two criteria must be met: 1) A 10 dB Standard Threshold Shift (STS) and 2) A hearing level of 25 dB or greater as averaged at 2000, 3000, and 4000 Hz. Except in the states of Washington and Oregon, age correction is permitted during the comparison analysis used to determine the presence of a 10 dB STS.

#### Follow-up Actions

A 30 day retest is permitted to confirm or repeal the initial shift indication. If a 30 day retest is anticipated, posting of the potential

(continued Page 2)

### A Review of OSHA Recordable Follow-Up Actions (continued)

Recordable to the OSHA 300 log is not yet required. If the retest repeals the event, no further followaction is required. If the retest confirms the event, posting of the event to the OSHA 300 log must occur with seven (7) calendar days of the confirmation test (or notification); likewise, you are given 7 days to post the event if no retest is conducted. When vou enter a recordable hearing loss case on the OSHA 300 Log, you must check the 300 Log column

for hearing loss. If subsequent audiometric testing indicates a non-persistent event, you may erase or line-out the recorded entry.

#### Work Relatedness Determination

While a retest is always recommended, a Work Relatedness Determination may be requested in lieu of a retest. However, you must post the event to the OSHA 300 log before requesting a determination. If a subsequent determination deems the loss nonoccupationally related, you may erase or line-out the recorded entry.

Pursuant to CFR 1904, an injury is "presumed" workrelated if an event or exposure in the work environment is the discernable cause of the injury or a significant aggravation to a pre-existing condition.

# Risk Levels of Occupational Noise Exposure

Risk of noise-induce hearing loss, along with numerous secondary effects associated with unprotected occupational noise exposure are real; however, risk of noise-induced impairment is also dependent upon daily noise exposure levels.

Risk estimates are often based upon impairment formulas and differ depending upon the impairment formula and how that formula defines impairment. If one is to estimate risk based upon the 1959 AMA impairment formula (which is still in use today in many State jurisdictions), the risk of impairment in typical occupational noise environments is low. Contrastingly, risk of impairment based upon the American Speech-Language-Hearing Association's (ASHA) formula suggests that a significantly greater percentage of Americans are at risk. This discrepancy is rooted in that fact that the 1959 AMA impairment formula incorporates 500, 1000, and 2000 Hz, as opposed to the ASHA formula that includes 1000, 2000, 3000, and 4000 Hz; the latter generates a higher risk estimate since it is those frequencies believed to contribute most to everyday speech perception.

The National Institute for Occupational Safety and Health (NIOSH) referenced the ASHA formula in a publication entitled "Criteria for a Recommended Standard: Occupational Noise Exposure". This study incorporated retrospective data to arrive at excess risk estimates for occupational noise; an excess risk estimate is derived by subtracting hearing loss due to the normal ageing process from general risk estimates. An unprotected 85 dB time weighted average exposure poses an 8% excess of material impairment due to noise over a 40 year career. An unprotected 90 dB exposure over a 40 year career poses a 25% excess risk. On the other hand, an 80 dB career long exposure poses but a 1% excess risk of noise induced impairment. Put another way, 92% of workers exposed to unprotected noise

levels of 85 dB would not sustain occupationally induced hearing loss over the duration of a 40 year career.

Dr, William W. Clark reminds us, however, to not make the mistake of believing that lower level noise environments pose zero risk of initiating the path to noise-induced hearing loss. Lower level noise exposures may in fact pose higher risk of noise induced hearing loss in the long run since behavioral responses to low level noise differ from that in response to higher level noise. Noise levels below 95 dB, while annoying, rarely elicit pain or discomfort, unlike noise levels exceeding 100 dB.

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#### Persistent and Non-Persistent Test Outcomes (continued)

testing, test subject attention span, and waning test subject interest. Upon the next testing cycle, some previously identified Recordable events qualify for "line-off" due to a *nonpersistent* shift status shown on the current test.

2) Secondly, another reason for listing the status of a previously reported shift event on the current 10 dB STS and/or Potential Recordable listing relates to OSHA's definition of a "30day retest"-defined as a test conducted within 30-days of the test indicating the initial shift event. Noting the earlier discussed "nonpersistent" rule, OSHA's (continued) insistence and adherence to the 30 day retest window is perplexing; nevertheless, T K Group recommends adherence to the 30 day retest window whenever possible. With that said, T K Group recognizes "real world" scheduling challenges that confront Hearing Loss Prevention coordinators attempting to comply with the 30-day retest requirement; resultantly, our system is configured to maintain a 45-day retest window. When a test conducted beyond the 45 day retest widow is submitted, our system simply treats that test as another annual test. The terms "persistent"

and "non-persistent" are used to delineate test outcomes on "late retests" to communicate in no uncertain terms recommended follow-up actions (i.e. Log, Line-off the log). Retests conducted within the 45day window are reported as "confirmed" or "repealed".

3) Lastly, the status of previously reported shift events are reported simply because many companies experience staff turn-over. For whatever reason, a previous coordinator may have not noted or acted on a shift event. For this reason, persistent and nonpersistent shift status is specified in the actionable report listings.

If a previously reported Recordable event has gone unresolved, there is no term limit for a determination, thus a retrospective determination may be requested for a previously identified Recordable



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#### **ATTENTION!**

In an effort that we provide this newsletter electronically as well as to inform you of immediate professional announcements, please email us your email address to:

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T K Group News is written by:

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Director Audiology

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# Risk Levels of Occupational Noise Exposure (continued)

As a result, one may be less likely to don hearing protection in lower (yet still damaging) noise levels. (Five Myths in Assessing the Effects of Noise on Hearing *William W. Clark*, *Ph.D., Central Institute for the Deaf*)

The NOISH excess risk estimates serve to underscore the often overlooked contributions to noiseinduced hearing loss from non-occupationally related sources. Sociocusis (noise induced hearing loss stemming from non-work related exposures) remains a significant problem in today's society.

While annual hearing loss prevention training should of course address work related noise risks, a comprehensive training program should also include proper domestic (off the job) protective practices. The NIOSH risk estimates also highlight the importance of thorough review of a worker's work related exposure levels and off the job noise exposure practices in the Work Relatedness Determination process.





As this graphic illustrates, an unprotected 85 dB time weighted average exposure poses an 8% excess of material impairment due to noise over a 40 year career. An unprotected 90 dB exposure over a 40 year career poses a 25% excess risk. On the other hand, an 80 dB career long exposure poses but a 1% excess risk of noise induced impairment.

"While annual hearing loss prevention training should of course address work related noise risks, a comprehensive training program should also include proper domestic (off the job) protective practices. "

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# Recording Hearing Loss to the OSHA 300 Form

When a Recordable hearing loss event has been confirmed by 30 day retest, the event must be posted to the OSHA 300 Log form within 7 calendar days of notification. If the loss event is deemed non-work related or if a loss event is non-persistent on a subsequent test, that event may be lined-off the OSHA log. Effective January 1, 2004, Recordable hearing loss entries are documented in the far upper right hand corner column marked "Hearing Loss"

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