RACINE ON THE LAKE
City of Racine, Wisconsin

**RACINE FIRE DEPARTMENT**
**Chief's Office: 262-635-7911**

December 3, 2007

Honorable Mayor and
Common Council

Dear Honorable Mayor and Common Council Members:

Earlier this past spring, the Fire Department learned that a number of retired firefighters had filed claims against the City and their workers compensation carrier, CVMIC, regarding the loss of hearing while they were employed by the City. I then made contact with Asst Personnel Director Terry Parker, and Julie Anastasio to see if there was data available to substantiate these claims.

On June 4th, 2007, CVMIC was able to produce a report on Fire Department hearing loss claims. This report had nine records of retired firefighters who had filed claims and received compensation for their hearing loss totaling $83,167.08. The most significant individual claim was for $21,696.94.

Historically, the fire service as a whole have always experienced issues with hearing loss. First and foremost in the loss of hearing are the mechanical and electronic sirens that are used when responding to emergency calls. The sirens can achieve db output in excess of 125 which is well above the short-term limit of 115 db, and well above the weighted 8-hour PEL limit of 85 db. In addition, when fire apparatus are working at fires either pumping water or operating aerial devices, there is significant motor and transmission noise for the equipment operators who are required to stay at their apparatus during the emergency. These noise levels routinely exceed 85 db often approaching 95 db for extended periods of time.

From the OSHA standards we have the following information:

**1910.95(b)(1)**
When employees are subjected to sound exceeding those listed in Table G-16, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the levels of Table G-16, personal protective equipment shall be provided and used to reduce sound levels within the levels of the table.

**1910.95(b)(2)**
If the variations in noise level involve maxima at intervals of 1 second or less, it is to be considered continuous.

TABLE G-16 - PERMISSIBLE NOISE EXPOSURES (1)

| Duration per day, hours | Sound level dBA slow response |
|---|---|
| 8 hours | 90 |
| 6 hours | 92 |
| 4 hours | 95 |
| 3 hours | 97 |
| 2 hours | 100 |
| 1 1/2 hours | 102 |
| 1 hour | 105 |
| 1/2 hour | 110 |
| 1/4 hour or less | 115 |

*Footnote(1) When the daily noise exposure is composed of two or more periods of noise exposure of different levels, their combined effect should be considered, rather than the individual effect of each.*

**1910.95(c)(1)**
The employer shall administer a continuing, effective hearing conservation program, as described in paragraphs (c) through (o) of this section, whenever employee noise exposures equal or exceed an 8-hour time-weighted average sound level (TWA) of 85 decibels measured on the A scale (slow response) or, equivalently, a dose of fifty percent. For purposes of the hearing conservation program, employee noise exposures shall be computed in accordance with appendix A and Table G-16a, and without regard to any attenuation provided by the use of personal protective equipment.

**1910.95(c)(2)**
For purposes of paragraphs (c) through (n) of this section, an 8-hour time-weighted average of 85 decibels or a dose of fifty percent shall also be referred to as the action level.

**1910.95(d)**
"Monitoring."

**1910.95(d)(1)**
When information indicates that any employee's exposure may equal or exceed an 8-hour time-weighted average of 85 decibels, the employer shall develop and implement a monitoring program.

Currently, we do not have the capability to provide hearing protection for firefighters who are responding to emergency calls while the vehicle is in motion. We do insist that all windows are kept closed, and we have installed siren shrouds to minimize the impact of siren noise on hearing loss. In addition we install sirens and warning devices as far away from the crew cab as practical.

At the scene of an emergency our equipment operators are unable to don hearing protection since they must monitor our two-way radios for emergency radio traffic directed at their apparatus.

For the department we would like to be proactive and either minimize or eliminate the risk of hearing loss in the future. While difficult to quantify cost savings now, we base our request on the most current information available including various OSHA standards, claims loss data, and recent lawsuits. We recommend the installation of intercom systems on all fire apparatus and the mandatory use of these systems to reduce or eliminate future hearing loss claims for the City.

The proposed intercom system for all fire apparatus will allow all members of the emergency crew to wear hearing protection inside the cab of fire apparatus while responding on calls. The difference here over earmuffs or plugs is the ability for all crewmembers to hear all emergency radio traffic, and to communicate among themselves prior to arriving at the scene of the emergency. Tactical plans of attack are routinely discussed among members, and the company officer always sets the priorities on the tasks that need to be accomplished based on the reported emergency prior to the arrival at the scene of the emergency.

Once on the scene of the emergency, the equipment operator will unplug his or her headset from the cab of the apparatus and take that headset to the pump or aerial control panel where he or she will plug into an external jack thus allowing them to hear and respond to all emergency radio traffic while wearing their hearing protection.

As always the use of this system will be mandatory, and written into our standard operating procedures.

Below is one of many articles available on the Internet detailing hearing loss issues in a multitude of cities.

Respectfully submitted

Steve Hansen, Fire Chief

**Council eyes another firefighter hazard: Hearing loss**

By MARK McDONALD
Philadelphia Daily News

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As he prepared to testify in City Council yesterday, Brian Mc- Bride, president of the Philadelphia Fire Fighters Union Local 22, could hear ringing in his ears.

It wasn't from one of the emergency vehicles just then making its noisy way around City Hall. Rather, it was from a long career as a firefighter coping with blaring sirens and head-jarring fire equipment.

McBride said he has suffered "significant hearing loss" and the ringing is always there. He's not alone.

According to testing conducted on 1,100 firefighters by the union, more than half of them have measurable hearing loss, he said.

"Talk to any 20-year firefighter, and you will find yourself repeating things because he simply cannot hear you," McBride said.

Yesterday, Council's Public Safety Committee gave initial approval to a bill introduced by Councilman Jack Kelly that would require hearing protection for all firefighters operating or riding on fire apparatus.

Fire Commissioner Lloyd Ayers said the hearing-loss issue is a subject of arbitration between the city and the union. Neither side has met since May, and Ayers said he's eager for to have the matter resolved.

But Councilman James Kenney said he didn't understand why protecting firefighters' hearing is a matter of contract negotiations.

"We don't arbitrate the quality of our ladders," Kenney said. "Why do we arbitrate this?"

Ayers said firefighters are now issued earplugs, though audiologist Lisa Blackman testified, "They should absolutely be thrown out yesterday."

Capt. Dennis Merrigan, who supervises Ladder 23 in Chinatown, said he had hearing loss from being an Army tank crewman due to the tank's loud engine.

Michael Dryden, an attorney who handles compensation claims for the union, said the city conducted a survey in 1994 after a noticeable rise in hearing-loss claims that year. But he said the city has not followed up on the study's recommendations, including better equipment. *