NIOSH

Testimony to DOL

TESTIMONY OF THE
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
ON
THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S
PROPOSED RULE ON
LOGGING OPERATIONS

29 CFR 1910
Docket No. S-048

Presented at the OSHA Informal Public Hearing
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I am Bryan D. Hardin, Deputy Director of the Division of Standards Development and Technology Transfer, National Institute for Occupational Safety and Health (NIOSH). With me today are senior staff from NIOSH. NIOSH appreciates this opportunity to appear in support of the Occupational Safety and Health Administration (OSHA) in promulgating updated rules for the protection of workers in the logging industry.

NIOSH has previously submitted comments to the docket [NIOSH 1989a] and our comments today are an expansion of parts of those comments. We take this opportunity to address several areas of particular concern: chain saws, training, and vehicle operator protection systems (rollover protective structures [ROPS] and seat belts).

Chain Saws

The chain saw is one of the primary tools of the modern logging industry. The type and size of the saw varies with the intended use. There are several occupationally related problems associated with the use of chain saws. Cutting injuries, muscle strains and sprains, toxic exposures from chain saw emissions, and hand-arm vibration (HAV) are related to the size, weight, performance, and protective features of the saws being used. We are taking this opportunity to provide additional information on chain brakes and HAV.

Cutting and felling trees is strenuous work, and studies indicate that fatigue is related to the occurrence of cutting accidents [Paulozzi 1987; BLS 1984]. Commercial logging with chain saws involves a number of factors that contribute to worker fatigue: physical exertion, noise, heat stress, and vibration exposure. NIOSH strongly recommends that chain brakes be required for saws used in commercial logging operations. Chain brakes automatically stop the chain when the operator's hand contacts the hand guard. This braking action would help to protect workers from cutting injuries under conditions of mental or physical fatigue.

The vibration produced by chain saws can produce nerve, vascular, and musculoskeletal health problems for persons operating chain saws. NIOSH is submitting a copy of our recent criteria document, Occupational Exposure to Hand-Arm Vibration [NIOSH 1989b] for OSHA's consideration in developing its final rule.

Training

Many activities in the logging industry are inherently dangerous because they involve the kinetic energy of large masses in motion [Holman et al. 1987; BLS 1984; NIOSH 1983]. Large releases of kinetic energy are not readily contained by engineering controls or administrative practices. Workers must follow appropriate safety procedures to avoid injuries and fatalities.

Worker training is important in hazardous industries, such as logging, to reduce the frequency of injuries and fatalities. NIOSH has included studies

that evaluate worker training programs and the effects of training programs on worker performance [Lauriski et al. 1989; Fiedler 1987; Cochran 1978; Benson 1984; Holdsworth 1970; ICRL 1971; Peters et al. 1988; Weidman 1976]. Several of these papers indicate significant reductions in the frequency or severity of accidents [Lauriski et al. 1989; Fiedler 1987; Cochran 1978].

NIOSH recommends that OSHA consider training and retraining requirements for workers in the logging industry that would be similar to those required by the Mine Safety and Health Administration (MSHA) for surface miners (30 CFR 48.21 et. seq.). The course content would be designed to meet the specific needs of workers in the logging industry. NIOSH recommends that the training courses include recognition of the hazards from exposure to HAV [NIOSH 1989b]; hazards from exposure to organic solvents, fuels, and chain saw exhausts; hazards from insects, animals, and toxic plants; first aid practices and procedures for obtaining emergency medical care as addressed in our earlier comments [NIOSH 1989a]; and safe logging practices as contained in the NIOSH criteria document [NIOSH 1976].

Vehicle Operator Protection Systems

NIOSH recommends that vehicles be equipped with ROPS, falling object protective structures, and seat belts. Seat belt use should be mandatory [NIOSH 1976]. ROPS have long been recognized as necessary on tractors and other vehicles operating off the road and in steep terrain [Knapp 1968]. In our comments to the OSHA docket on logging [NIOSH 1989a], NIOSH submitted a study on fatalities of loggers in Washington State from 1977 to 1983 [Paulozzi 1987]. This study indicates that 12 rollover fatalities occurred in this period and that 11 of these were due in part to failure to wear seat belts (ROPS is required in this jurisdiction). A recent study on farm equipment injuries notes a decreasing trend in tractor rollover injuries for a rural Ohio county [Hopkins 1989]. Although it does not scientifically prove the effectiveness of ROPS, that trend is consistent with increasing use of ROPS on farm equipment.

NIOSH has also included two additional reports on logging injuries that were not included in our initial submission [Holman et al. 1987; Cloutier et al. 1986].

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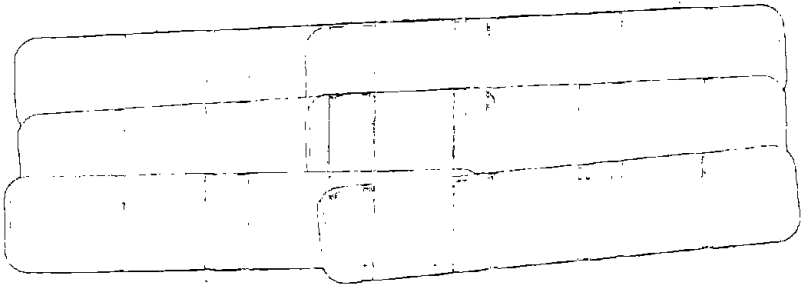

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15. Supplementary Notes

16. Abstract (Limit: 200 words) This testimony expresses the support of NIOSH for the work of OSHA in promulgating updated rules for the protection of workers in the logging industry. Several issues of particular concern are addressed, namely chain saws, training, and vehicle operator protection systems (rollover protective structures (ROPS) and seat belts). Occupationally related problems associated with the use of chain saws include cutting injuries, muscle strains and sprains, toxic exposures from chain saw emissions, and hand/arm vibration. Worker training is extremely important and NIOSH recommends that OSHA consider training and retraining requirements for workers in this industry that would be similar to those required by the Mine Safety and Health Administration for surface miners. NIOSH recommends that vehicles be equipped with ROPS, falling object protective structures, and seat belts.

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