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May 13, 2009

Regina P. Cobb
Agency Management Analyst Senior
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**Comments of the Tree Care Industry Association concerning the proposed
16VAC25-73. Tree Trimming Operations**

Dear Ms. Cobb,

The Tree Care Industry Association, Inc. (TCIA) enthusiastically supports the development of a VOSH Standard for tree care operations that is derived from the most recent revision of the ANSI Z133.1, the American National Standard for Arboricultural Operations – Safety Requirements (Z133).

TCIA (formerly the National Arborist Association or NAA) is a trade association whose members are tree care companies. As of April 30, we represent 67 companies headquartered in Virginia as well as about eight to 10 regional/national companies with operations there, all of whom have a direct and material interest in this standard.

In June 2008, at VOSH's invitation, we very willingly assembled a delegation of Virginia TCIA members to help VOSH refine the proposed standard, and we are generally very pleased with the result.

It is important for VOSH to understand the "community" it intends to regulate. Our typical member employs eight full-time "arborists" in its field force. There are estimated to be as many as 300,000 people in the Arboriculture profession in the U.S.¹, so obviously the industry is comprised of many, many very small businesses.

Within the arborist profession, one can delineate two broad types of employer, the utility line clearance contractor and the residential/commercial tree care firm. While it is instructive to understand the differences in the work, it is an oversimplification to assume that all employers fall entirely into one class or the other.

1. The utility line clearance contractor, or utility vegetation management company, as it is sometimes referred to, works for the utility owner or operator to trim trees and maintain vegetation around overhead conductors or in utility corridors. A relatively small number of employers engage in line clearance. Although fewer in number, these tend to be larger employers. In TCIA's membership, the median number of employees in a

¹ Dr. John Ball, South Dakota State University, personal communication. Dr. Ball has conducted a multiple-year study of accidents in the arborist profession.

company that does one-half or more of its work for utilities is 20, as compared to a median of eight employees for all companies surveyed. Our largest utility line clearance tree trimming members each employ thousands. In Virginia, line clearance contractors are already covered by a relatively contemporary and stringent Vertical Standard, 29 CFR §1910.269.

2. The other type of employer is the residential/commercial tree care firm that prunes and otherwise cares for trees on residential and commercial properties. Significantly, some companies that work primarily in residential/commercial also perform limited utility line clearance and as such are regulated by 1910.269. Otherwise, in Virginia the residential/commercial tree care company is covered by general industry standards as well as the Virginia Overhead High Voltage Line Safety Act.

Table 1. Typical tasks and associated hazards in the tree care industry.

| <u>Arborist Task</u> | <u>Related Hazard(s)</u> |
|--|--|
| Working at height to trim, remove or perform other work in trees. | Struck-by to person(s) on the ground from falling tree, limb, branch, hanger, or hand tools. Fall hazard to worker aloft due to failure to use fall protection; cut line; tree failure or equipment failure. |
| Working near energized electrical conductors. | Electric shock from direct or indirect contact. |
| Chain saw use while tree climbing, working from an aerial lift or cutting on the ground. | Lacerations due to chain saw kickback or accidental contact with the moving or stationary saw chain. Falls due to cut line and failure to use redundant system; tied into the cut tree portion. |
| Using a chain saw to piece out or to fell a tree | Limbs/trees striking co-workers on the ground, or chain saw operator, or aerial lift boom causing lift failure. |
| Operating a self-feeding brush chipper | Being caught by and drawn into the feed/cutting mechanism. |

Regardless of the type of arboriculture performed, there is important general information about the tree care industry that should inform this rule-making process:

- Definitive data on how many companies do tree work is unavailable; however we can state with confidence that there are at least 17,000 such companies nationally and at least 750 in Virginia. Ninety-eight percent of our members perform tree trimming and/or removal, and these services combined make up almost 86 percent of their business volume. Other tree care-related operations include: tree fertilization, pesticide application, and cabling and bracing. The most significant tasks and their attendant hazard(s) are summarized in Table 1.
- The occupation is fraught with hazard leading to very high injury statistics. Recent reports from the Centers for Disease Control and Prevention (CDC)/NIOSH^{2,3} corroborate VOSH’s historical data on fatal accidents by illustrating that both days away from work (DAFW) and fatal accident statistics for tree care occupations are significantly higher than in most other industrial sectors.

² *Fact Sheet: Non-Fatal Occupational Injuries in the Landscape Services Industries*. Published by Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, 4676 Columbia Parkway, Cincinnati, OH 45226-1998

³ *Work-Related Fatalities Associated with Tree Care Operations – United States, 1992–2007*. Morbidity and Mortality Weekly Report (www.cdc.gov/mmwr), Vol. 58, No. 15. April 24, 2009.

- Private sector tree care businesses are plagued with an unusually high employee turnover rate.
- The Morbidity and Mortality Weekly Report from CDC cites insufficient training as a key contributor to worker accidents in the tree care industry.
- The tree care industry has had the constructive guidance of the ANSI Z133.1 available to it since 1972. The Z133 Committee has diligently updated the Standard keeping it abreast of improvements in technology and knowledge.

The existing patchwork of standards that VOSH is compelled to use to regulate our industry is insufficient and confusing to practitioners and enforcers. In the past, we have expressed our concerns about the application of Logging Standard (29 CFR §1910.266) to tree trimming and removal operations. The reality is that logging and tree care are two separate professions, and most equipment and methods used in these respective professions are quite different. Therefore, an “Arborist Standard” is in the best interests of our industry and VOSH in its safety oversight role.

Economic Impact of this Proposal

Generally speaking, employers in the tree care industry, including line clearance tree trimming contractors, will have to familiarize themselves with the requirements of any new regulation and train employees on its requirements. However, because the proposed regulation is very closely based on the extant revision of ANSI Z133.1, a standard that has been available to the industry since 1972, the cost of compliance should be negligible, since theoretically companies should already comply with Z133.

There is one concern we would like to register with the practical implementation of another proposed regulation, 16VAC25-95, which is incorporated by reference at 16VAC25-73-40(C)(5). It calls for at least one CPR/first aid trained individual to be available to the crew at every work site.

Our industry’s average annual employee turnover is 30 percent, and employee absenteeism on any given day can be very high. Furthermore, there is a strong seasonal fluctuation in the volume of work and hence the size of the workforce. Because of these factors, the strict enforcement of 16VAC25-95 has the unintended consequence of imposing a severe economic hardship, especially to the small employer in tree care.

For example, if the typical company (with a field workforce of eight) employs three first aid/CPR trained employees to work on different crews and one does not show up for work on Monday morning, the company may be forced to send one-third of its workforce home, because it cannot assemble a compliant crew. Alternately, if because of business volume this same company decides that it must field an additional crew, it is prevented from doing so until it can train another employee in first aid/CPR.

Turnover tends to happen within 30-60 days of hire, so it would be reasonable and workable if the employer can be exempted from the one-trained-person-per-crew requirement by documenting that it initiates first aid/CPR training for all full-time crew personnel within two months (60 days) of hire.

There is precedent for an exemption in the Vertical Standard at 1910.269(b)(1)(i): “For field work involving two or more employees at a work location, at least two trained persons shall be available. However, only one trained person need be available if all new employees are trained in first aid, including CPR, within 3 months of their hiring dates.”

Specific concerns listed in order of their occurrence

16VAC25-73-10(C). The latter part of the statement should be revised. Our suggested new language is underlined: This regulation does not apply to tree removal activities where the primary objective is land

clearing in preparation for construction, real estate development, or other related activities, unless directly supervised by a qualified arborist or qualified line clearance arborist.

One would probably infer that the original reference to “qualified arborist” encompasses the qualified line clearance arborist; but since the latter term is separately defined in the proposal, it should be made unmistakably clear that either a qualified arborist or a qualified line clearance arborist may supervise a land clearing operation, making said operation subject to the proposed standard.

16VAC25-73-10(C). Being derived from Z133, the proposed standard contains language gleaned from a variety of OSHA and ANSI standards, including 1910.269 and 1910.331-335. To be sure, there is similar and in some cases identical language in 1910.269 and this document that could lead to confusion in the regulated community and particularly among line clearance tree trimmers. Our aim is to reduce or eliminate any confusion for all parties with a concise statement. We recommend that the following be added to the end of 16VAC25-73-10(C): Line clearance tree trimming operations, as defined in this regulation, are subject to the requirements of 1910.269 paragraphs (a)(2), (b), (c), (g), (k), (p) and (r) as well as this regulation. Where this regulation and 1910.269 contain similar requirements, the qualified line clearance tree trimmer shall follow the requirements of 1910.269.

16VAC25-73-20. "Job briefing" is defined as the communication of at least the following subjects for arboricultural operations: hazards associated with the job, work procedures involved, special precautions, electrical hazards, job assignments, and personal protective equipment.

In order to make the goals of the job briefing achievable for the employer and enforceable for VOSH, the wording must be changed to “known hazards associated with the job” or “recognizable hazards associated with the job.”

16VAC25-73-60(A)(9). The second sentence of this paragraph, “Fall protection shall be provided for employees performing maintenance or inspection on top of units six feet or more above a lower level,” does not appear in the ANSI Z133 Standard, and for good reason. The dilemma centers on aerial lift devices with what are called cab guards or “headache racks.”

The cab guard is primarily to protect the truck cab and any occupants from falling debris. Secondly on some units, the operator must take one or two steps on the top of the cab guard to climb into the bucket. Most lift manufacturers and employers require the lift operator to perform a brief visual inspection of the upper boom’s critical components and again, this brief inspection is performed from the top of the cab guard.

Whether alighting into the bucket or performing the brief inspection, there is no feasible form of fall protection that can be provided. Guardrails on top of the cab guard interfere with the boom’s rotation and could easily cause catastrophic damage to the boom or bucket. The fall restraint or fall arrest device has not yet been invented that would allow the operator the necessary mobility to perform the safety inspection and prevent the operator from contact with some lower level, including the road surface.

The current language of Z133 from which this is borrowed minimizes any risk to a negligible level, akin to climbing a ladder. Work shall not be performed from the top of the cab guard. Certainly we would agree that if inspection or maintenance that must be performed is more extensive than a very brief, visual inspection, then the employer must make provisions for fall protection.

The second sentence of the proposed 16VAC25-73-60(A)(9) must be stricken.

16VAC25-73-60(G)(9). We take exception solely to the phrase, "...if the crane manufacturer's specifications and limitations do not prohibit such use." This one short phrase completely undermines the purpose of the remainder of (G)(9).

ANSI Z133.1 provides VOSH with the most contemporary, most realistic and safest guidance for arborist operations employing cranes, bar none. As VOSH already knows, ANSI Z133.1-2006 contains provisions allowing the use of a crane to lift (hoist) a qualified arborist, using an arborist climbing line and arborist saddle, and secured to a designated anchor point on the boom line or crane. The standard goes on to lay out two pages of requirements that must be met by the overall crane operation before the climber can be hoisted, all of which VOSH proposes to adopt.

By contrast, OSHA general industry regulation and other crane standards prohibit lifting a worker on the load line, but are silent with respect to the circumstances faced by arborists with the removal of trees too dangerous to climb, because such circumstances were not considered when these documents were drafted.

Specifically, the arborists' practice of being hoisted by a crane has been deemed to be contrary to 29 CFR §1910.180, Crawler, Locomotive and Truck Cranes. However, we are convinced that this guidance, when it was written over 30 years ago, was intended to prevent a worker from placing his foot into the crane hook, grabbing the load line and being hoisted into the air. That practice bears no semblance whatsoever to the carefully controlled, safe work practice utilized by arborists.

Paradoxically, if crane manufacturer's operating guidelines address the practice at all, they mimic §1910.180 or other outdated and inappropriate guidance on the matter.

This concern of hoisting a worker with a crane has been recognized repeatedly by both federal and state agencies, as well as industry professionals. For example, in 1993, Mr. Roy Gurnham of the Directorate of Construction issued a letter of interpretation stating that "OSHA has already determined that when the use of a conventional means of access to an elevated worksite would be impossible or more hazardous, a violation of 1910.180(h)(3)(v) will be treated as de minimis if the employer has complied with the provisions set forth in 1926.550(g)(3), 1926.550(g)(4), 1926.550(g)(5), 1926.550(g)(6), 1926.550(g)(7) and 1926.550(g)(8)." The exception that OSHA made was to allow the use of a personnel basket, sometimes called a man-cage, to hoist workers, under construction conditions, on the load line. With this interpretation, OSHA made an important exception to a dated rule that benefited worker safety.

Our industry has attempted to use man-cages to enter trees under certain conditions, but at times the man-cage can actually place the tree worker in an extremely hazardous situation. Often, the lack of balance as well as the interference from the cables and metal structure while attempting to use a chain saw creates a situation that increases risk, even jeopardizing the lives of the workers. It is, in part, for these reasons that our industry's safety professionals developed procedures for tying into a crane above the headache ball or on a clevis near the jib or boom tip with an arborist saddle and climbing line meeting ANSI Z133 requirements. As an industry, we have been using cranes this way for almost 50 years with no fatalities.

This practice was recognized and condoned by California OSHA in 2004 when it adopted an emergency amendment, which subsequently became a permanent regulation, in their tree access standard, Title 8, Section 3427. Their original justification was: "[f]or the preservation of the public safety and the safety of the affected workforce, it is necessary to immediately adopt standards that would prescribe a safe alternative means and method to access trees." Amendments to Title 8, Section 3427 now permit a qualified tree worker to enter a tree suspended by the closed safety type hook of a crane when a tree cannot be safely accessed by conventional methods permitted in existing standards.

In addition, Oregon OSHA has issued a letter of interpretation condoning the practice of hoisting a climber, and Washington State OSHA regulations spell out under what circumstances a “boatswain’s chair” may be used to hoist a worker with a crane. To further understand this issue, we point to OSHA’s industry-specific standards for marine terminals contained in 29 CFR 1917.45(j)(1)(ii) that permit the employee to be hoisted by a crane or derrick in a “boatswain’s chair” or other device rigged to prevent it from accidental disengagement from the hook or supporting member.

For clarification, a boatswain’s chair is a seat supported by slings attached to a suspended rope, designed to accommodate one employee in a sitting position. It is an archaic term for something that was the precursor to the modern-day work-positioning arborist saddle we use in a tree or on a crane load line.

The overarching reason that the tree worker is hoisted by the crane or uses the crane as a tie-in point is because it presents the *safest alternative* for that removal operation. Moreover, in all of the thousands and thousands of hazardous tree removal jobs in which arborists have used cranes, *not one climber in our industry has been killed by using the ANSI-compliant and safe work practice of being hoisted by the crane.*

Juxtaposed against this statistic are at least 11 tree workers who died in calendar years 2006 and 2007 when the tree they were in failed. Indeed, there are several fatalities among the 27 “tree trimming” accidents cited by VOSH in which a tree failed while the climber was in it. Exercising hindsight, a crane would have offered a far more safe and secure tie-point to any one of them.

In the interest of worker safety and in consideration of the fact that it is writing a standard applicable solely to arborist operations and not the full scope of all crane operations, VOSH needs to make a clean break from old crane standards and their one-size-fits-all requirements. The phrase, “...if the crane manufacturer’s specifications and limitations do not prohibit such use” must be removed from 16VAC25-73-60(G)(9).

16VAC25-73-60(D)(10). It is infeasible to comply with the statement: “The winch shall never be used with personnel, including the operator, within the span of the winch cable and the winch.”

The statement could be interpreted to mean that workers cannot be situated anywhere between the winch and where the winch line is attached to a limb, even if they are to the side of the winch line. We believe that the original intent of the Z133 language was to address the hazard of a worker in very close proximity being clipped by a winch line that is suddenly tensioned. If this is the case, there has to be a better way to phrase it.

We suggest the following revision:

“10. All personnel shall be sufficiently clear of the winch and winch cable (line) before the winch is activated and while the winch cable is under tension so as to avoid being struck.”

16VAC25-73-90(A)(9). **The following statements must be re-phrased to clarify their intent:** “All components of a climbing system (e.g., ropes, pulleys, etc.) shall meet the manufacturer’s design, specifications, and limitations. Components from different climbing systems shall not be combined without prior approval of the manufacturers.”

Perhaps it is because these statements are not derived from ANSI Z133.1-2006 language that we cannot decipher their intent. As goals they would be unattainable, and as VOSH requirements, they would be both unattainable to the employer and unenforceable by VOSH.

No manufacturer that we are aware of creates a complete climbing system, although some manufacturer may produce more than one of the main components. Competition and product liability being what they are, Company X is not likely to grant “prior approval” for the use of Company Y’s rope, if Company X manufactures both a rope and a saddle. Even if a manufacturer wanted to give prior approval, it could not possibly anticipate all the combinations of components that the arborist may wish to employ.

To clarify what we believe is VOSH’s intent with this paragraph, we suggest the following wording:

16VAC25-73-90(A)(9). The qualified arborist shall assure that each component of the climbing system is approved by the manufacturer for its intended use as well as its compatibility with other components of the climbing system.

Misunderstanding and confusion stems from the fact that “climbing system” was never defined in Z133. We suggest the following definition:

“Climbing system” means the various pieces of gear (components) that the arborist relies upon to secure himself/herself while aloft in the tree, such as but not limited to: an arborist saddle, one or more arborist climbing lines, and one or more lanyards as well as carabiners and/or snap hooks approved by their manufacturer for climbing.

On behalf of our members and the hundreds of workers this proposal potentially affects, we thank you for the opportunity to comment. We sincerely appreciate the dedication and diligence of the VOSH personnel who brought the proposal to this point, and we look forward to working with VOSH for the expedient adoption of an effective arborist standard to keep our workforce safe.

Sincerely,

A handwritten signature in black ink that reads "Cynthia Mills, CAE". The signature is written in a cursive, flowing style.

Cynthia Mills, CAE, CMC
President and CEO
Tree Care Industry Association