Last Updated: April 27, 2011

Procedures for Obtaining Agency Interpretations.

All outside requests for interpretations of the regulation shall be referred to the VOSH Director at:

VOSH Director
Virginia Department of Labor and Industry
13 South 13th Street
Richmond, VA 23219

Interpretations.

[NOTE: During the regulatory promulgation process, the Department issued explanatory and interpretive information to commenters as the regulation progressed from the proposed to the final stage. Interpretive guidance for regulatory language that did not change from the proposed to the final regulation remains the official position of the VOSH Program. Interpretations based on proposed language that was later changed in the final regulation is provided for background purposes only.]

16VAC25-73-10, Scope, Purpose and Applicability

A. This regulation contains arboriculture safety requirements for pruning, repairing, maintaining, and removing trees; cutting brush; and for using equipment in such operations. (Note: Terms specific to the safe practice of arboriculture are defined in 16VAC25-73-20.)
B. The purpose of this regulation is to provide safety criteria for arborists and other workers engaged in arboricultural operations.
C. This regulation is intended to apply to all employers engaged in the business, trade, or performance of arboriculture, including employers engaged in tree pruning, repairing, maintaining; removing trees; cutting brush; or performing pest or soil management during tree care operations who hire one or more persons to perform such work. This regulation may require situational modifications in response to personnel emergencies and is not intended to limit the options available to emergency responders. This regulation does not apply to nonarboricultural landscaping operations. This regulation does not apply to line-clearance tree trimming activities as defined in 16VAC25-73-20. Such activities are covered by 16VAC25-90-1910.269. This regulation does not apply to logging operations covered by 16VAC25-90-1910.266. This regulation does not apply to tree removal activities where the primary objective is land clearing in preparation for construction, real estate development, rights-of-way for new utility installations or other related activities, unless directly supervised by a qualified arborist or qualified line-clearance arborist. Such activities are covered by 16VAC25-90-1910.266.

Comment: "... line-clearance tree trimming is already regulated by an industry-specific standard – 29 C.F.R. Section 1910.269. As such, the ULCC concludes that an additional regulation covering the operations of its members is unnecessary. If, however, VOSHA determines that an additional regulation would present some safety benefit in relation to costs of implementation, then the ULCC has a number of suggested changes.

A. Section 1910.269 Regulates the Hazards of Line-Clearance Tree Trimming Work, and a Separate Regulation Applicable to Line-Clearance Tree Trimming is Unnecessary

Based on the ULCC's analysis, the provisions in Section 1910.269 cover many – if not most – of the hazards addressed in VOSHA's proposal. Specifically, the following hazards or issues are currently addressed in Section 1910.269:

- **First aid (in fact, the first aid and CPR provisions in Section 1910.269 are more stringent than those proposed by VOSHA)**
- **Brush chippers**
- **Communication, *i.e.* the requirement for a second line-clearance tree trimmer to have voice-communication with the first trimmer for certain work (in fact, Section 1910.269(r)(1)(ii) is more protective than the provisions proposed by VOSHA in Section 25-73-50(B)(4))**
- **Minimum approach distances for workers and equipment**
- **Insulated tools**
- **Prohibitions on work during adverse weather conditions Sprayers, including walking and working surfaces requirements applicable when employees stand on top of equipment**
- **Stump cutters**
- **Power and chain saws**
- **Climbing ropes**
- **Fall protection requirements, which allow fall protection used for aerial lifts to consist of either full-body harness with six foot lanyards or body belts with shorter lanyards**
- **Provisions that mandate substantial training in "the safety-related work practices, safety procedures and other safety requirements" that "pertain to their respective job requirements," as well as "applicable emergency procedures"**
- **"Regular supervision" and "inspections" to determine whether employees are complying with safety-related work practices**
- **Refresher or re-training because of: deficiencies found during the inspections; the introduction of new technology or equipment; or the performance of tasks that are performed less than once per year**
- **An assessment of the potential electrical hazards presented by the work as well as a job briefing are required before each job**
- **Requirements for mechanical equipment, including inspections, operating requirements, and the use of outriggers**

VOSHA proposes regulating these same hazards. VOSHA's reasoning in proposing a second regulation to cover the same hazards already addressed in Section 1910.269 is unclear. This is particularly true given the confusion that a second regulation would cause. For example, how would compliance officers decide whether to cite Section 1910.269 or the Tree Trimming Operations regulation? Would employers be required to cull through both regulations and determine which provisions to include in compliance programs and training materials? What if Section 1910.269 and the VOSHA regulation have different requirements for the same hazard – how would employers identify the provisions that apply?

Uncertainty about compliance obligations will result in citations that do not target true safety hazards, and may even result in additional hazards if front-line supervisors are unable to

determine which regulation applies to the work being performed. As such, VOSHA should exempt line-clearance tree trimming from the Tree Trimming Operations regulation.

Finally, the ULCC concludes that VOSHA has underestimated the costs associated with implementing a second vertical standard for the line-clearance industry. ULCC member companies estimated that developing programs to comply with Section 1910.269 resulted in costs of between $1 million to $10 million. The cost of training an employee to the level of a qualified line-clearance arborist was approximately $12,000. While there is clearly overlap between the VOSHA proposal and Section 1910.269, the costs of developing and implementing an entirely new program and providing training will be substantial. These costs are not justified by any safety benefits in the line-clearance industry. "

Response: The Department agrees that some additional language in the Applicability section of the proposed regulation would help to clear up any confusion on the issue of line-clearance tree trimming.

First, we would note that it has been the Department's stated intent, at the request of the tree trimming industry, to use as much of ANSI Z133.1-2006 as possible because of the familiarity of the industry with the national consensus standard, to limit costs of compliance as much as possible, to aid in ease of developing standardized training programs, to ease the burdens of compliance as much as possible for multi-state employers, and because it represents the input of many varied interest groups, including employer representatives, employee representatives, government agencies, public utility companies, safety professionals and others. In fact, five of ULCC's members were participants in the development of ANSI Z133.1-2006 (Asplundh Tree Expert Co., The Davey Tree Expert Co., Lewis Tree Service, Inc., McCoy Tree Surgery, Inc., and Wright Tree Service, Inc.). The Department made no initial attempt to change the scope or application of the proposed regulation with regard to line-clearance tree trimming with the understanding that the industry did not have any significant concerns with ANSI Z133.1-2006, but is willing to do so now to address more recent concerns that have apparently developed since its adoption in 2006.

In developing a proposed language change to address line-clearance tree trimming issues, the Department took into consideration that work around overhead powerlines can be done by several different groups:

Group 1: tree trimmers working for the owner or operator of the lines,

Group 2: tree trimmers who contract with the owner of operator of the lines, and

Group 3: tree trimmers who have no connection with the owner or operator of the lines.

The Department also had to consider the implications of the Virginia Overhead High Voltage Line Safety Act, Va. Code §59.1-406, et.seq., which contains requirements and prohibitions against working around overhead high voltage lines (voltage in excess of 600 volts as defined in the Act), but does not apply to work "performed by the employees of the owner or operator of the systems or independent contractors engaged on behalf of the owner or operator of the system to perform the work."

The Department recommends the following changes to the regulatory language in the Application section. The effect of the changes will be to:

* exempt line-clearance tree trimming, as defined in the proposed regulation, from coverage under the proposed regulation

* provide that work around overhead power lines that does not meet the definition of line-clearance tree trimming in the proposed regulation, must either be conducted in accordance with the Virginia Overhead High Voltage Line Safety Act (voltage in excess of 600 volts as defined in the Act), or for lesser voltages conducted in accordance with 16VAC25-90-1910.333(c)(1)

The recommended changes are as follows:

16VAC25-73-10.C.
"C. This regulation is intended to apply to all employers engaged in the business, trade, or performance of arboriculture, including employers engaged in tree pruning, repairing, maintaining; removing trees; cutting brush; or performing pest or soil management who hire one or more persons to perform such work. This regulation may require situational modifications in response to personnel emergencies and is not intended to limit the options available to emergency responders. **This regulation does not apply to line-clearance tree trimming activities as defined in 16VAC25-73-20. Such activities are covered by 16VAC 25-90-1910.269.** This regulation does not apply to logging operations covered by 16VAC25-90-1910.266. 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. Such activities are covered by 16VAC25-90-1910.266."

The Department recommends the following change to the definition of "line-clearance tree trimming," which, with the exception of the last sentence (which is derived from Va. Code §59.1-413), is identical to the corresponding definition in 16VAC25-90-1910.269(x):

16VAC25-73-20
" ~~**"Line clearance"**~~ **"Line-clearance tree trimming"** means the pruning, trimming, repairing, maintaining, removing, ~~**treating,**~~ or clearing of trees or the cutting of brush (vegetation management) that is within 10 feet (3.05 m) of electric supply lines and equipment; ~~**and vegetation management work performed by qualified line-clearance arborists or qualified line-clearance arborist trainees for the construction or maintenance of electric supply lines and/or the electric utility right-of-way corridor.**~~ Line-clearance **tree trimming** activities are performed by the employees of the owner or operator of the electrical or communication systems, or independent contractors engaged on behalf of the owner or operator of the system to perform the work.

The above changes will clarify that Groups 1 and 2 will be covered by 16VAC25-90-1910.269 generally and -1910.269(r) specifically when engaged in "line-clearance tree trimming" activities, while Group 3 will be covered by the proposed regulation.

Please also see the Department's response to **Commenter 1** that clarifies that the following activities, even when undertaken by employees of the owner or operator of the power lines or a subcontractor on behalf of the owner/operator are not covered by 16VAC25-90-1910.269(r), but will be covered by the Logging Standard, 16VAC25-90-266, unless the tree removal activities are directly supervised by a qualified arborist or qualified line-clearance arborist, in which case the proposed regulation would apply:

1. Right-of-way clearance for **new** power generation, transmission and distribution lines, where no exposure to electrical lines is present.

2. Land clearing activities associated with the construction of new power generation, transmission and distribution facilities, where no exposure to electrical lines in present.

3. Tree trimming operations around buildings, offices, facilities owned or operated by the cooperatives or other utility companies, where no exposure to electrical lines is present.

The following changes will be made to 16VAC25-73-50, Electrical hazards:

16VAC25-73-50. Electrical hazards.

"A. General.

1. All overhead and underground electrical conductors and all communication wires and cables shall be considered energized with potentially fatal voltages. **This section does not apply to line-clearance tree trimming as defined in 16VAC25-73-20, which shall be conducted in accordance with 16VAC25-90-1910.269. Non-line-clearance tree trimming work around overhead high voltage lines covered by §§ 59.1-406 through 59.1-414 of the Code of Virginia, Overhead High Voltage Line Safety Act (Act)(voltage in excess of 600 volts as defined in the Act), shall be conducted in accordance with the Act. Non-line-clearance tree trimming work around overhead electrical lines of 600 volts or less not covered by the Act shall be conducted in accordance with 16VAC25-90-1910.333(c)(1).**

(Source: TH-03, Final Regulation Agency Background Document, September 8, 2009).

Comment: "The [Virginia, Maryland, and Delaware Association of Electric] cooperatives are regulated at various levels, including by the U.S. Department of Agriculture's Rural Utilities Service and the Virginia State Corporation Commission. In addition, tree trimming work, when performed by electric utilities in Virginia, complies with federal OSHA requirements, *see* 29 C.F.R. § 1910.269(r), and American National Standards Institute standard Z133.1. The cooperatives have a variety of tree trimming operations: some have an arborist on staff and conduct all trimming in-house, others use all outside contractors, still others use a hybrid arrangement somewhere in between the two. Whatever the case, utility tree trimming operations in Virginia are guided by standards set forth by the Division of Energy Regulation of the State Corporation Commission. The cooperatives respectfully submit that safety requirements for right-of-way maintenance and other utility operations are adequately regulated outside the scope of the Proposed Rule."

Response: With regard to a broader exemption that would cover all electric utility operations performed by both cooperatives and large utility companies, the Department agrees that additional language in the Applicability section of the proposed regulation would help to clear up any confusion. The Department generally agrees that 16 VAC 25-90-269, Electric power generation, transmission, and distribution, should remain the primary regulation applicable to the industry, whenever exposure to tree-related electrical hazards covered by that regulation are present.

However, there are at least three tree-related activities not directly addressed by 16 VAC 25-90-269, for which further clarification is needed. These activities present hazards to employees which need to be addressed by either the proposed regulation or the Logging Standard, 16 VAC 25-90-266, to assure similarly situated employees are provided equivalent protections, no matter what the tree trimming/removal activity involves. This regulatory coverage is needed, because although 16 VAC 25-90-269 contains requirements in some areas that are covered by the proposed regulation (e.g., Brush chippers, Sprayers and related equipment, Stump cutters, Rope, Fall protection), the regulation is silent on such essential requirements as Climbing and tie-in requirements, Rigging, and Tree Removal, all of which come into play in the following tree trimming/removal activities:

1. Right-of-way clearance for **new** power generation, transmission and distribution lines, where no exposure to electrical lines is present.

2. Land clearing activities associated with the construction of new power generation, transmission and distribution facilities, where no exposure to electrical lines in present.

3. Tree trimming operations around buildings, offices, facilities owned or operated by the cooperatives or other utility companies, where no exposure to electrical lines is present.

Section 16 VAC 25-73-10.C. currently addresses tree removal activities where the primary objective is land clearing in preparation for construction, real estate development or other related activities, and makes clear that such activities are exempt from the proposed regulation and covered by the Logging Standard, 16 VAC 25-90-266; unless the tree removal activities are directly supervised by a qualified arborist, in which case the proposed regulation would still apply. The exemption as currently drafted clearly addresses **item 2** above and would offer the described options for compliance to the cooperatives and utility companies without further change.

The Department recommends addressing **item 1** above by adding the following language to 16 VAC 25-73-10.C:

> ….
> "This regulation does not apply to tree removal activities where the primary objective is land clearing in preparation for construction, real estate development, **right-of-ways for new utility installations,** or other related activities, unless directly supervised by a qualified arborist. Such activities are covered by 16VAC25-90-1910.266.

With regard to **item 3** above, such activities clearly fall under the current scope of the proposed regulation, regardless of whether the tree trimming work is done by a subcontractor to the cooperative or utility company, or by their own employees, so no additional change to the proposed regulation is necessary. (Source: TH-03, Final Regulation Agency Background Document, September 8, 2009).
(Source: TH-03, Final Regulation Agency Background Document, September 8, 2009).

Comment: "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 <u>or qualified line clearance arborist.</u>

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."

Response: The Department agrees with the Commenter's proposed language change and recommends the following change to the regulatory language:

16VAC25-73-10.C.

"C.
….
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 **<u>or qualified line-clearance arborist</u>**. Such activities are covered by 16VAC25-90-1910.266.

(Source: TH-03, Final Regulation Agency Background Document, September 8, 2009).

<u>16VAC25-73-40.E,</u>

E. Fire protection.
1. Equipment shall be refueled only after the engine has stopped. Spilled fuel shall be removed from equipment before restarting.
2. Equipment shall not be operated within 10 feet (3.05 m) of refueling operations or areas in which refueling has recently taken place.
3. Flammable liquids shall be stored, handled, and dispensed from approved containers.
4. Smoking shall be prohibited when handling or working around flammable liquids.
5. Clothing contaminated by flammable liquid shall be changed as soon as possible.
6. Open flame and other sources of ignition shall be avoided.

Comment: The provisions in Section 25-73-40(E) address fire protection, but do not mention the burning of vegetation in open areas. ULCC member companies may perform open burning,

provided that it is permitted in the local jurisdiction. VOSHA should clarify that open burning is permitted."

Response: See response to this Commenter above which exempts "line-clearance tree trimming" activities, as defined in 16VAC25-73-20, from the proposed regulation.

In addition, the language questioned by the Commenter is original to ANSI Z133.1-2006. As previously mentioned, it has been the Department's stated intent, at the request of the tree trimming industry, to use as much of ANSI Z133.1-2006 as possible because of the familiarity of the industry with the national consensus standard, to limit costs of compliance as much as possible, to aid in ease of developing standardized training programs, to ease the burdens of compliance as much as possible for multi-state employers, and because it represents the input of many varied interest groups, including employer representatives, employee representatives, government agencies, public utility companies, safety professionals and others. Five of ULCC's members were participants in the development of ANSI Z133.1-2006 (Asplundh Tree Expert Co., The Davey Tree Expert Co., Lewis Tree Service, Inc., McCoy Tree Surgery, Inc., and Wright Tree Service, Inc.).

The Department does not recommend any change to the proposed regulatory language.

(Source: TH-03, Final Regulation Agency Background Document, September 8, 2009).

16VAC25-73-60.A.7.

7. If previously installed by the manufacturer, step surfaces and platforms on mobile equipment shall be properly maintained.

Comment: Second, Section 25-73-60(A)(7) proposes that "platforms on mobile equipment" be "skid resistant." This provision is taken directly out of the ANSI standard. ULCC member companies, many of which are on the ANSI Committee, have never interpreted this provision to require skid resistance for aerial lifts. The ULCC requests that VOSHA confirm that interpretation."

Response: With regard to 16VAC25-73-60.A.7, Va. Code §40.1-22(5) provides in part that:

> "Such standards [as adopted by the Virginia Safety and Health Codes Board] when applicable to products which are distributed in interstate commerce shall be the same as federal standards unless deviations are required by compelling local conditions and do not unduly burden interstate commerce."

The requirement in 16VAC25-73-60.A.7 is a provision that could be interpreted to place a burden on manufacturers of covered mobile equipment to install skid resistant materials, and could therefore be

covered by Va. Code §40.1-22(5). To avoid possible legal ramifications of this code section, the Department recommends the following language change:

16VAC25-73-60.A.7.

"7. **If previously installed by the manufacturer, skid resistant** ~~**S**~~ **s**tep surfaces and platforms on mobile equipment shall be **properly maintained** ~~**skid resistant**~~."

(Source: TH-03, Final Regulation Agency Background Document, September 8, 2009).

16VAC25-73-60.A.9.

9. Riding or working outside or on top of units shall not be permitted unless the units are designed for that purpose or the operator is performing maintenance or inspection. Fall protection shall be provided for employees performing maintenance on top of units six feet or more above a lower level. Fall protection is not required when performing inspections on top of units six feet or more above a lower level.

Comment: 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. Secondarily 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."

Response: The Department agrees in part and disagrees in part with the Commenter's suggested

language changes.

First, the Department notes that the provision in question applies to all vehicles and mobile equipment, so deleting the suggested language merely to address a concern about aerial lift devices, unnecessarily weakens employee fall protection requirements.

Second, the Department agrees that inspections can be reasonably excluded from the requirement for fall protection, since the employee when mounting the vehicle will normally have the use of hands and feet for climbing as would be the case on a ladder (in fact, there is nothing in the proposed regulation that would prohibit the use of a ladder to conduct the inspection in lieu of climbing on the vehicle). There is also precedence in OSHA regulations for exempting employees from using fall protection while conducting inspections in 16 VAC 25-175-500(a)(1), Fall Protection (in Construction):

> "The provisions of this subpart do not apply when employees are making an inspection, investigation, or assessment of workplace conditions prior to the actual start of construction work or after all construction work has been completed."

OSHA explained this exception to the general fall protection requirements in the preamble to the regulation:

> "OSHA has set this exception because employees engaged in inspecting, investigating and assessing workplace conditions before the actual work begins or after work has been completed are exposed to fall hazards for very short durations, if at all, since they most likely would be able to accomplish their work without going near the danger zone. Also, the Agency's experience is that such individuals who are not continually or routinely exposed to fall hazards tend to be very focused on their footing, ever alert and aware of the hazards associated with falling. These practical considerations would make it unreasonable, the Agency believes, to require the installation of fall protection systems either prior to the start of construction work or after such work has been completed. Such requirements would impose an unreasonable burden on employers without demonstrable benefits.
>
> OSHA notes that the operations covered by paragraph (a)(1) are normally conducted in good weather, that the nature of such work normally exposes the employee to the fall hazard only for a short time, if at all, and that requiring the installation of fall protection systems under such circumstances would expose the employee who installs those systems to falling hazards for a longer time than the person performing an inspection or similar work. In addition, OSHA anticipates that employees who inspect, investigate or assess workplace conditions will be more aware of their proximity to an unprotected edge than, for example, a roofer who is moving backwards while operating a felt laying machine, or a plumber whose attention is on overhead pipe and not on the floor edge."
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> 59 Fed. Reg. 40672-40753

Third, while inspections can be classified as potentially of short duration, maintenance activities cannot be routinely assumed to be of short duration. Maintenance activities also involve employees using their hands to do the actual maintenance work, instead of being able to use their hands to hold onto parts of the vehicle/equipment to avoid falls. Accordingly, the Department does not recommend that fall protection requirements be eliminated for maintenance activities. As referenced above, there is nothing

to prohibit an employer from allowing its employees to use ladders, scaffolds, scissor lifts, etc., for maintenance activities, all of which would avoid the need for guard rails or a personal fall arrest system by the employee.

The Department recommends the following change to the regulatory language:

16 VAC 25-73-60.A.9.

"9. Riding or working outside or on top of units shall not be permitted unless the units are designed for that purpose or the operator is performing maintenance or inspection. Fall protection shall be provided for employees performing maintenance ~~**or inspection**~~ on top of units six feet or more above a lower level. **Fall protection is not required when performing inspections on top of units six feet or more above a lower level."**

(Source: TH-03, Final Regulation Agency Background Document, September 8, 2009).

16VAC25-73-60.B.1.

9. Riding or working outside or on top of units shall not be permitted unless the units are designed for that purpose or the operator is performing maintenance or inspection. Fall protection shall be provided for employees performing maintenance on top of units six feet or more above a lower level. Fall protection is not required when performing inspections on top of units six feet or more above a lower level.

Comment: VOSHA proposes throughout the regulation that employers must "tag" and "remove from service" any equipment that is "damaged." See e.g. Section 25-73-60(B), (C) and (D). It is not clear why damaged equipment must be both tagged and removed from service. Employers could certainly tag equipment warning employees not to use it, or could remove the equipment from the site or disable it so that it cannot be used.

The ULCC suggests amending the language to read as follows: "Damaged [insert type of equipment] must be tagged or removed from service such that employees cannot use the [equipment].""

Response: See response to this Commenter above which exempts "line-clearance tree trimming" activities, as defined in 16VAC25-73-20, from the proposed regulation.

The Department has encountered numerous instances during VOSH inspections where employers have removed from service such items as damaged ladders or damaged extension cords, which were then put back in to use by an employee that did not realize the damaged item was not to be used, because they had not been informed of the employer's action. Tagging items removed from service provides that notice to any employee on any workshift that the item is damaged and not to be used.

The Department does not recommend any change to the proposed regulatory language.

(Source: TH-03, Final Regulation Agency Background Document, September 8, 2009).

16VAC25-73-60.B.22.

> 22. All underground hazards shall be located prior to operating aerial lift devices off-road. These hazards could include natural gas tanks, underground oil tanks, and septic systems.

Comment: Proposed Section 25-73-60(B)(22) states that employers "shall locate" underground hazards prior to using aerial devices off-road. Proposed Section 25-73-60(E)(6) states that the operator "shall be aware" of underground utilities prior to performing work with a stump cutter.

While the ULCC understands the intent of this provision, it is simply not practical. First, there is no evidence that the use of aerial devices or stump cutters in off-road locations typically poses a hazard from underground utilities. Second, requiring line-clearance arborist employers to contact providers of underground utilities each and every time an aerial device or stump cutter is used off-road would be time-consuming and costly, and would most often provide little or no safety benefit. It is evident from the proposal that VOSHA has not tried to quantify these costs or assessed whether there would be a safety benefit. Given the lost work time that would result if these provisions are adopted, the costs would be substantial."

Response: See response to this Commenter above which exempts "line-clearance tree trimming" activities, as defined in 16VAC25-73-20, from the proposed regulation.

In addition, the language questioned by the Commenter is original to ANSI Z133.1-2006 - see Agency Response to item 10 above.

With regard to stump cutters, their use could constitute an excavation under Va. Code § 56-265.14, et. seq., the Underground Utility Damage Prevention Act, which provides in §56-265.17, that:

> "…no person, including operators, shall make or begin any excavation or demolition without first notifying the notification center for that area. Notice to the notification center shall be deemed to be notice to each operator who is a member of the notification center. The notification center shall provide the excavator with the identity of utilities that will be notified of the proposed excavation or demolition. Except for counties, cities, and towns, an excavator who willfully fails to notify the notification center of proposed excavation or demolition shall be liable to the operator whose facilities are damaged by that excavator, for three times the cost to repair the damaged property, provided the operator is a member of the notification center. The total amount of punitive damages awarded under this section, as distinguished from actual damages, shall not exceed $10,000 in any single cause of action."

Source: TH-03, Final Regulation Agency Background Document, September 8, 2009).

16VAC25-73-60.G.9.

> 9. The use of a crane to hoist a qualified arborist into position is prohibited, except when the use of conventional means of reaching the work area, such as, but not limited to, an aerial lift, would be more hazardous or is not physically possible because of worksite conditions. If the above exception applies, a qualified arborist may be hoisted into position utilizing a crane if the crane manufacturer's specifications and limitations do not prohibit such use, and any fall protection requirements of the crane manufacturer are complied with, and the arborist is tied in with an arborist climbing line and arborist saddle and secured to a designated anchor point on the boom line or crane….

Comment: "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)."

Response: The Department respectfully disagrees with the Commenter's recommendation that the regulation be amended to permit an employer to use a crane contrary to its manufacturer's specifications and limitations:

First, the Department disagrees with the Commenter's assertion that the language cited "completely undermines the purpose of the remainder of (G)(9)." That would only be accurate if all crane manufacturer's prohibited the practice, but the Department has no information to indicate that is the case. Even the commenter notes "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," which certainly implies that some manufacturers do not address the practice in their crane manuals. If a manufacturer does not reference the practice, then the employer can proceed with using a crane under the conditions listed in 16VAC25-73-60.G.9.

Second, it is longstanding policy of the Department to require employers to comply with manufacturer's specifications and limitations during the use of vehicles, equipment, machinery, tools, etc., through the use of the "General Duty Clause" (Va. Code §40.1-51.1(a)); specific requirements in existing OSHA standards (e.g., 1926.550(a)(1)), and more recently through VOSH regulation §16 VAC 25-60-120, which provides:

> "The employer shall comply with the manufacturer's specifications and limitations applicable to the operation, training, use, installation, inspection, testing, repair and maintenance of all machinery, vehicles, tools, materials and equipment; unless specifically superseded by a more stringent corresponding requirement in Part 1910. The use of any machinery, vehicle, tool, material or equipment which is not in compliance with any applicable requirement of the manufacturer is prohibited, and shall either be identified by the employer as unsafe by tagging or locking the controls to render them inoperable, or be physically removed from its place of use or operation."

It simply is not the policy of the Department to sanction through regulation a practice that would abrogate a manufacturer's specifications and limitations on the safe use of its machinery, vehicles, tools, materials and equipment. If, as the Commenter suggests, the manufacturer's limitations are based on outdated ideas, and safety of the employees being lifted is no longer a concern, it is up to the industry to reach out to the manufacturers to get those limitations changed.

(Source: TH-03, Final Regulation Agency Background Document, September 8, 2009).

16VAC25-73-60.I.10.

10. The winch shall never be used with personnel, including the operator, within the span of the winch cable and the winch.

Comment: "16VAC25-73-60(I)(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.""**

Response: The Department respectfully disagrees with the Commenter's contention that compliance with the provision would be infeasible, and that the provision may have only been designed to address the hazard of a worker being clipped by a winch line that is suddenly tensioned. The Department does not recommend adoption of the language proposed by the Commenter.

First, the Department notes that the language in question is original to ANSI Z133.1-2006, with no changes having been made by the Department. It has been the Department's stated intent, at the request of the tree trimming industry, and the TCIA in particular, to use as much of ANSI Z133.1-2006 as possible because of the familiarity of the industry with the national consensus standard, to limit costs of compliance as much as possible, to aid in ease of developing standardized training programs, to ease the burdens of compliance as much as possible for multi-state employers, and finally because it represents the input of many varied interest groups, including employer representatives, employee representatives, government agencies, public utility companies, safety professionals and others. TCIA was a participant in the development of ANSI Z133.1-2006.

Second, while Department personnel were not part of the ANSI Committee and cannot speak directly to the intent of the original language, there are a number of potential hazards associated with winches other than the winch line being suddenly tensioned. They include the winch line breaking under tension which would expose employees to whipping winch lines; a catastrophic failure of the winch or the winch anchoring point, which would not only expose employees to a winch line out of control, but could expose them to flying parts from the winch itself; or a failure of the tree while the winch line was under tension which would expose employees to both falling tree sections and the out-of-control winch line. The Department believes the hazards of using a winch line under tension are sufficiently dangerous to warrant such a strong prohibition as is described in the original ANSI language. Employees need to be required to be well-clear of the winch line path while it is under tension, with only the tree climber and the winch operator in any proximity to the winch line while it is under tension, with those two employees not being in the path but on either end of the winch line connection points.

(Source: TH-03, Final Regulation Agency Background Document, September 8, 2009).

16VAC25-73-90.A.9.

> 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.

Comment: "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."

Response: The original language was developed in response to discussions held during the Department's meeting with interested parties of June 10, 2008, which was attended by TCIA

representatives. Nonetheless, the Department agrees with the Commenter's recommendation to amend 16VAC25-73-90.A.9., as follows:

16VAC25-73-90.A.9.

"9. ~~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.~~ **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."**

The Department agrees with the Commenter's recommendation to add a definition of "climbing system", as follows:

16VAC25-73.20

"Climbing system" means the various pieces of gear or 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.

(Source: TH-03, Final Regulation Agency Background Document, September 8, 2009).

16VAC25-73-90.E.13.

13. All workers other than the individual engaged in manual land-clearing operations shall be at least two tree lengths away from the tree or trunk being removed. This requirement does not apply in the presence of site restrictions, such as waterways or cliffs. Other arborists and workers shall be beyond the trees' striking range and at a distance as close to twice the tree's height as possible.

NOTE: 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 certified arborist. Such activities are covered by 16VAC25-90-1910.266.

Comment: "Second, the note to Section 25-73-90(E)(13) is similar to proposed Section 25-73-10(C), but states that the work must be "directly supervised by a *certified* arborist." (emphasis added). The term "certified arborist" is not defined, and the ULCC is unclear about what VOSHA means by using this term. To the extent that VOSHA is considering requiring arborists to be certified by the International Society of Arboriculture (ISA), the ULCC urges VOSHA to reject that position. Given the statement in the preamble to the regulation, VOSHA has apparently decided that requiring ISA certification would be expensive and provide little safety benefit. As such, the use of the term "certified" appears to be a mistake. VOSHA should correct Section 25-

73-90(E)(13) to state that work "directly supervised by a qualified arborist or qualified line-clearance arborist" is covered by the regulation and is therefore not "logging."

Response: The Department agrees with the Commenter and recommends the following language change:

16VAC25-73-90.E.13.

13. All workers other than the individual engaged in manual land-clearing operations shall be at least two tree lengths away from the tree or trunk being removed. This requirement does not apply in the presence of site restrictions, such as waterways or cliffs. Other arborists and workers shall be beyond the trees' striking range and at a distance as close to twice the tree's height as possible.
NOTE: 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 ~~**certified**~~ **qualified** arborist. Such activities are covered by 16VAC25-90-1910.266.

(Source: TH-03, Final Regulation Agency Background Document, September 8, 2009).

16VAC25-73-90.E.13. CONTINUED

Comment: "Third, the term "directly supervised" is not defined. On some line-clearance projects, multiple crews consisting of some qualified line-clearance arborists and some trainees may be supervised by a single foreman. The foreman and other qualified line-clearance arborists are involved in assessing the hazards of the job and planning the work pursuant to the job briefing process, but may not be directly involved in the work tasks, and may even leave the job site at certain times during the work. Given these factors, VOSHA must clarify that the qualified line-clearance arborist is not required to be directly involved in each job task. Rather, a qualified line-clearance arborist must be involved in assessing the hazards, planning the work, and identifying any special measures that must be taken to mitigate hazards. VOSHA should change the language in Sections 25-73-10(C) and 25-73-90(E)(13) to read, in relevant part: "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 a qualified arborist or qualified line-clearance arborist assesses the work, identifies potential hazards, and identifies any protective measures or work methods that must be followed during the work."[1]

Response: The Department respectfully disagrees with the Commenter's suggested change and does not recommend any change to the proposed regulation. The intent of the language referenced is to

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[1] The introduction to the regulation states that VOSHA currently applies the Logging standard to work involving the felling of any tree. This policy is not consistent with federal OSHA's. See Federal OSHA Compliance Directive 02-01-045 (August 21, 2008). Moreover, applying the Logging standard under these circumstances raises serious due process concerns in that line-clearance employers arguably have no notice that they are subject to the Logging standard, particularly given that OSHA did not consider or evaluate the impact of the logging standard on line-clearance or tree care industries when the standard was promulgated.

assure, that since the more stringent requirements contained in the Logging Standard would not have to be complied with, the immediate presence of and direct supervision by a qualified arborist or qualified line-clearance arborist will provide an added level of protection to prevent accidents and avoid employee exposure to tree felling hazards.

(Source: TH-03, Final Regulation Agency Background Document, September 8, 2009).