

Utility Arborist Newsline

SEP/OCT 2015
VOLUME 6
NUMBER 5

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The Game-Changers in OSHA's 1910.269 Revision

By Mark Foster, Safety Operations Manager,
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The changes by OSHA to Electric Power Generation, Transmission, and Distribution Maintenance and Construction 1910.269 (or 269 for short) are numerous, probably because there really hasn't been a revision for more than 20 years.

Unlike the ANSI process, OSHA doesn't have a set schedule for updating regulations and it does relatively little consulting with industry stakeholders prior to the announcement of proposed rulemaking. This means that OSHA makes up its mind on how the standard should read, then asks the opinion of those who have to live with it. During the comment period, the IBEW, IEEE, ISA, TCIA, and the Utility Line Clearance Coalition (ULCC) were just a few of the groups heavily involved in providing input to OSHA before the final 269 was published in the Federal Register.

The Key Sections of the OSHA 1910.269 Revision

You may not realize that only about 25 percent of 269 actually pertains to the *line clearance arborist*. By my way of thinking, there are eight areas in 269 which have significant changes, and within those areas, there can be more than one game-changing edit. First of all, Section 1910.269(a)(1)(i)(E) is a must-read, as it clearly states what applies to *line clearance tree trimming*:

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- Training - 1910.269(a)(2)
- Information transfer between the host employer and contract employer - 1910.269(a)(3)
- Medical services/first aid - 1910.269(b)
- Job briefing - 1910.269(c)
- Fall protection - 1910.269(g)
- Material handling and storage - 1910.269(k)
- Mechanical equipment - 1910.269(p)
- Line clearance tree trimming operations - 1910.269(r)

You may recall Scott Huffmaster's recent article, *Regulatory Changes and the Effect on the Line Clearance Contractor*, published in the 2015 May/June issue of *Newsline*. The article focused on the totally new section 1910.269(a)(3) **Host Transfer of Information** and the much expanded section 1910.269(g)(2) **Fall Protection**.

In short, **Host Transfer of Information** spells out a process that was, in most cases, already being done by most utilities and line clearance contractors. Under the revised 269, all utilities must inform arborist sub-contractors of certain potential safety issues; as well as requiring sub-contracted arborists to communicate, within two working days, any utility system hazards that they happen to discover.

The big change to **Fall Protection** is the move to the Full Body Harness (FBH). For good or bad, compliance with FBH is

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required if you do not have a fall restraint system. An entire article could be written just on this topic. If you really want a glimpse into how OSHA thinks, read the preamble of 269. The part on why they dismissed many safety professionals' thoughts on the FBH is, well, interesting.

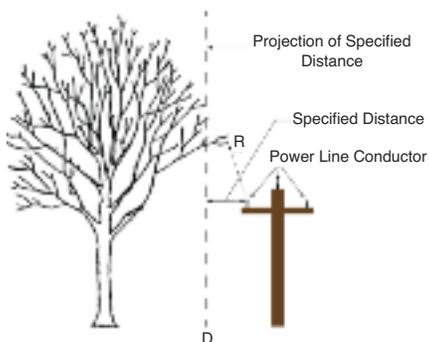
An Important Definition

In the revised 269, even the definition of *line clearance tree trimming* in section 1910.269(x) can be a game-changer. It includes:

“the pruning, trimming, repairing, maintaining, removing, or clearing of trees, or the cutting of brush, that is within the following distance of electric supply lines and equipment:

- (1) *For voltages-to-ground of 50 kilovolts or less—3.05 meters (10 feet);*
- (2) *For voltages-to -ground of more than 50 kilovolts—3.05 meters (10 feet) plus 0.10 meters (4 inches) for every 10 kilovolts over 50 kilovolts.”*

The diagram below is not in 269, but it represents the 10 ft. ground-to-sky zone. Any work on any tree having any part (above ground) within this 10 ft. zone would be considered line clearance tree trimming



The 10' vertical line is what has been agreed upon by OSHA in conjunction with lawyers that represent Utility Line Clearance Coalition (ULCC) and other key interested parties as to how OSHA will enforce 269. This is outlined in the info that OSHA provides to their inspectors.

In the revised 269, even the definition of *line clearance tree trimming* in section 1910.269(x) can be a game-changer.

—even if the work is dragging the brush off the right-of-way (ROW) to chip or for disposal.

The big question is: If you are removing danger trees further back from the wire, are you doing line clearance work? Some will say yes. OSHA may say that if you are felling trees, it's considered logging and you must comply with 1910.266, which is the logging standard. There is a greater probability of being held to the logging standard (266, for short) if you are felling trees for a new transmission line where there are no existing wires. Remember, under 266, all employees must have CPR/First Aid qualifications on day one of the job; 269 requires one worker to be CPR/First Aid trained and allows three months to qualify a second person on the crew in CPR/First Aid.

More of the Nitty Gritty

With regards to worker training beyond CPR/First Aid, section 1910.269(a)(2)(vii) removes the requirements for employers to certify their employees have been trained. Be careful

with this one! All the training requirements are still the same; it's just the certifying part that was removed.

In fact, there is some additional training required on Minimum Approach Distance (MAD) and the *“skills and techniques necessary to maintain those distances.”* This means the worker needs to be trained on how to recognize 0.65 meters or 2.14 ft. or whatever distance is appropriate for the voltage.

Speaking of MADs, the details are in section 1910.269(l)(3). If you have been doing your homework, you will say, “Hey, (l)(3) is not a section that OSHA says pertains to the Line Clearance Arborist!” Ahh, yes, but OSHA has required line clearance arborists to follow section 1910.269(r)(1)(iii) which says *“Line clearance tree trimmers shall maintain the MAD from energized conductors given in Table R-5, Table R-6, Table R-7, and Table R-8.”* Pay close attention to those tables, and if someone wants you to follow a smaller (lesser in distance) MAD, the answer is, “No thanks, it would be illegal to do so.”

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Table R-6 - Alternative Minimum Approach Distances (MAD) for Voltages of 72.5 kV and Less¹

Nominal voltage (kV) phase-to-phase	Distance			
	Phase-to-ground exposure		Phase-to-phase exposure	
	m	ft	m	ft
0.50 to 0.300 ²	Avoid Contact		Avoid Contact	
0.301 to 0.750 ²	0.33	1.09	0.33	1.09
0.751 to 5.0	0.63	2.07	0.63	2.07
5.1 to 15.0	0.65	2.14	0.68	2.24
15.1 to 36.0	0.77	2.53	0.89	2.92
36.1 to 46.0	0.84	2.76	0.98	3.22
46.1 to 72.5	1.00	3.29	1.20	3.94

¹ Employers may use the MAD in this table provided the worksite is at an elevation of 900 meters (3,000 feet) or less. If employees will be working at elevations greater than 900 meters (3,000 feet) above mean sea level, the employer shall determine MADs by multiplying the distances in this table by the correction factor in Table R-5 corresponding to the altitude of the work.

² For single-phase systems, use voltage-to-ground.

In the revised 269, Table R5 contains the altitude correction factor, and Table R8 lists the MADs that OSHA requires when working around DC voltages.

The OSHA-provided MADs are newly calculated using worst-case scenarios, which increase the MAD lengths significantly. OSHA has also stated that the *line clearance arborist's* electrical exposure is phase-to-ground, which allows a shorter MAD to be used than the phase-to-phase MADs we formerly used. In short, the actual MADs you will see on updated charts will be only inches different for the distribution voltages. I could get into a long discussion on the components of MAD, but I would not want to make this article any drier or mind numbing than it already might be.

Section 1910.269(c)(1)(i) on **Job Briefing** makes a slight change, which requires the employer to provide the *employee in charge* of the job with all available information and training that relates to the termination of electrical infrastructure characteristics and conditions. This further shows the importance OSHA places on a proper and thorough job briefing to help keep workers safe.

Section 1910.269(r)(5) on **Power Saws/Chainsaws** has been worded awkwardly. OSHA tried to match the

Table R-7 - Alternative Minimum Approach Distances (MAD) for Voltages of More than 72.5 kV^{1 2 3}

Voltage Range phase-to-phase (kV)	Distance			
	Phase-to-ground exposure		Phase-to-phase exposure	
	m	ft	m	ft
72.6 to 121.0	1.13	3.71	1.42	4.66
121.1 to 145.0	1.30	4.27	1.64	5.38
145.1 to 169.0	1.46	4.79	1.94	6.36
169.1 to 242.0	2.01	6.59	3.08	10.10
242.1 to 362.0	3.41	11.19	5.52	18.11
362.1 to 420.0	4.25	13.94	6.81	22.34
420.1 to 550.0	5.07	16.63	8.24	27.03
550.1 to 800.0	6.88	22.57	11.38	37.34

- Employers may use the MAD in this table provided the worksite is at an elevation of 900 meters (3,000 feet) or less. If employees will be working at elevations greater than 900 meters (3,000 feet) above mean sea level, the employer shall determine MADs by multiplying the distances in this table by the correction factor in Table R-5 corresponding to the altitude of the work.
- Employers may use the phase-to-phase MADs in this table provided that no insulated tool spans the gap and no large conductive object is in the gap.
- The clear live-line tool distance shall equal or exceed the values for the indicated voltage ranges.

requirement in 266 (the logging standard) that drop-starting a chain saw was prohibited. Unfortunately, the way it is worded seems to have created confusion. OSHA finally has said they will follow the ANSI Z 133's definition of drop-starting: pushing the saw away from the body while pulling on the starter cord. As long as the saw is not moving (i.e. lock the left elbow) or you support the saw when possible, you are not drop-starting the saw. Of course, you must always start the saw with the chain brake on!

Reminders and Resources

Remember that OSHA 1910.269 spells out the minimum requirements. Even though items like arc-flash or Fire Retardant clothing rules do not apply to Line Clearance Arborists by *federal* law, 25 states have their own OSHA state plans that may be more restrictive. Also, a utility can always require more stringent rules as part of the contract. I keep a copy of 269 with highlighted sections that apply to line clearance tree trimming. That way, I can keep it straight at a glance.

Here are some helpful online resources:

- **1910.269 Frequently Asked Questions**
https://www.osha.gov/dsg/power_generation/faqs.html
- **Full New 1910.269**
https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9868
- **Get a comparison of old 269 to new (if you do not mind registering)**
<http://electricalarcflashsafety.com/tool-for-understanding-new-osh-1910-269-standard/>

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