OSHA Electric Power Standards Matrix

Quick Guide

This matrix was developed in an effort to make it easier to understand the changes that were made to the OSHA Power Standards published in April 2014. The information below will be useful in understanding how to read the matrix.

Section Name
This column is the section name given in the OSHA Standards

Key Words
These key words are associated with the specific topic to make it easier to find a specific standard

New Standard…
This column gives the language of the new/updated standard

General Notes
This column typically gives background information on the reason behind the change/update. Page numbers in the column are associated with final rule published in the Federal Register

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269 Enforcement Date February 17, 2015	Major Changes	General notes	Definitions
				1910.269(a) General				
General	1910.269(a)	1926.95		Updated	Updated Language throughout paragraph			
Subset- Application	1910.269(a)(1)(i)(A)	1926.950(a)(3)	Line clearance tree trimming	New	Line clearance tree trimming operations performed during line construction and construction work involving electric power generation installations performed during start-up and commissioning.	Added line clearance tree trimming operations performed during construction to 1910.269		
		1926.950(a)(3)	Generation construction	New		Added electric power generation work performed during construction work to 1910.269.	OSHA elected not to include generation in the construction standard because the majority of plant construction work is similar to any type of building trade until the plant goes into start-up and commissioning prior to turnover to the plant owner. Once start-up and commissioning begins work is conducted under 1910.269.	
Subset- Training	1910.269(a)(2)	1926.950(b)	Training	Updated	Updated to include two (2) training areas: **all employees** and **qualified employees** performing work covered by 1910.269.	Training paragraph reads easier and outlines requirements for all employees and qualified employees performing work covered by 1910.269.		Qualified employee (qualified person)- An employee (person) knowledgeable in the construction and operation of the electric power generation, transmission, and distribution equipment involved, along with the associated hazards. Note 1 to the definition of "qualified employee (qualified person)": An employee must have the training required by (a)(2)(ii) of this section to be a qualified employee. Note 2 to the definition of "qualified employee (qualified person)": Except under (g)(2)(iv)(C)(2) and (g)(2)(iv)(C)(3) of this section, an employee who is undergoing on- the-job training and who has demonstrated, in the course of such training, an ability to perform duties safely at his or her level of training and who is under the direct supervision of a qualified person is a qualified person for the performance of those duties

Standard Numbers
These columns provide the specific OSHA standard numbers for 1910 and the corresponding 1926 standard also

New…
This column explains whether the standard is new, has been updated or there was no change

Major Change
This column identifies the major change in easy to understand language

Definitions
These definitions are relevant to the specific topic

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2014 OSHA Power Standard Updates

2014 OSHA Power Standard Updates

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				1910.269(a) General				
General	1910.269(a)	1926.95		Updated	Updated Language throughout paragraph			
Subset- Application	1910.269(a)(1)(ii)(A)	1926.950(a)(3)	Line clearance tree trimming	New	Line clearance tree trimming operations performed during line construction and construction work involving electric power generation installations performed during start-up and commissioning.	Added line clearance tree trimming operations performed during construction to 1910.269		
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Subset- Training	1910.269(a)(2)	1926.950(b)	Training	Updated	Updated to include two (2) training areas: **all employees** and **qualified employees** performing work covered by 1910.269.	Training paragraph reads easier and outlines requirements for all employees and qualified employees performing work covered by 1910.269.		Qualified employee (qualified person)- An employee (person) knowledgeable in the construction and operation of the electric power generation, transmission, and distribution equipment involved, along with the associated hazards. Note 1 to the definition of ‘‘qualified employee (qualified person)’’: An employee must have the training required by (a)(2)(ii) of this section to be a qualified employee. Note 2 to the definition of ‘‘qualified employee (qualified person)’’: Except under (g)(2)(iv)(C)(2) and (g)(2)(iv)(C)(3) of this section, an employee who is undergoing on-the-job training and who has demonstrated, in the course of such training, an ability to perform duties safely at his or her level of training and who is under the direct supervision of a qualified person is a qualified person for the performance of those duties

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	1910.269(a)(2)(i)(C)	1926.950(b)(1)(iii)	Training	New	Added the degree of training shall be determined by the risk to the employee for the hazard involved.	Requires a risk evaluation.	When the employer has constructive knowledge of a hazard (for example, when industry practice recognizes particular hazards), then each employee exposed to the hazard must be trained. For training to comply with OSHA, it must be sufficient to enable the employee to recognize the hazard and take reasonable measures to avoid or adequately control it.	
	1910.269(a)(2)(ii)(C)	1926.950(b)(2)(iii)	Training	New	Added skills and techniques necessary to maintain minimum approach distances (MAD)	Employees must know MAD distances **plus** the safe work practices required to ensure MAD distances are maintained.		
	1910.269(a)(2)(ii)(E)	1926.950(b)(2)(v)	Training	New	Added the recognition of electrical hazards according to exposure and the skills and techniques necessary to control or avoid these hazards.	Employees must know how to recognize electrical hazards and understand how to successfully control and avoid the hazards.		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(a)(2)(iii)		Tree trimming training	New	Added training and competency requirements for line-clearance tree trimmers who are not qualified. Including skills and techniques to determine nominal voltage and exposed live parts, knowledge of MAD distances for the type of voltages involves and skills and techniques to maintain MAD.	Requires additional training for non-qualified tree trimmers.		Line-clearance tree trimmer- An employee who, through related training or on-the-job experience or both, is familiar with the special techniques and hazards involved in line-clearance tree trimming. Note 1 to the definition of ''line-clearance tree trimmer'': An employee who is regularly assigned to a line-clearance tree-trimming crew and who is undergoing on-the-job training and who, in the course of such training, has demonstrated an ability to perform duties safely at his or her level of training and who is under the direct supervision of a line-clearance tree trimmer is considered to be a line-clearance tree trimmer for the performance of those duties. Note 2 to the definition of ''line-clearance tree trimmer'': A line-clearance tree trimmer is not considered to be a ''qualified employee'' under this section unless he or she has the training required for a qualified employee under paragraph (a)(2)(ii) of this section. However, under the electrical safety- related work practices standard in Subpart S of this part, a line-clearance tree trimmer is considered to be a ''qualified employee''.
	1910.269(a)(2)(iv)	1926.950(b)(4)(iii)	Retraining requirements	No Change			For example: an employee who is expected to administer CPR in the event of an emergency needs retraining if he or she has not used those emergency practices over the course of the previous year. Retraining would also be required for an employee who needs to climb a pole if it has been more than a year since he or she has used pole climbing practices. pg. 20349	
	1910.269(a)(2)(viii)	1926.950(b)(7)	Demonstrate proficiency	New	Added requirements for the employer to ensure each employee demonstrates proficiency in their required work practices before training can be completed.	Training completion is linked to demonstrated proficiency.		

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	1910.269(a)(2)(viii)	1926.950(b)(7)	Training records	New	Added note: Although training records are not required, employment records indicating an employee has successfully completed the training is one way of keeping track with demonstrated proficiency.	No written certification required.	The final rule does not require a certification. (Preamble statement) OSHA does not need training certifications for enforcement purposes under final §1910.269 and subpart V because compliance with the training requirements can be determined through interviews with management and workers. pg. 20349	
	1910.269(a)(2)(viii)	1926.950(b)(7)	Previous training	New	Added note: An employer may demonstrate an employee with previous training has demonstrated proficiency by confirming that the employees has the training, use an examination or interview to determine that the employee understands safety practices and supervise the employee closely until demonstrated proficiency is completed.		OSHA stresses that the employer, not the employee, has an obligation to determine that an employee demonstrates proficiency before he or she is deemed to have completed training. pg. 20351	
Subset-Information transfer	1910.269 (a)(3)	1926.950(c)(1)	Host employer responsibilities	New	Added requirements for Host Employers to inform Contract Employers of characteristics of the installation, conditions related to the safety of work performed, information about the design and operation of the system so contractors can make required assessments and any other information about the design and operation that is related to contract employee safety.	Information transfer is linked to 1910.269(a)(4) Existing characteristics and conditions, which is broken up into two distinct areas, characteristics of the system and conditions of the installation.	Information transfer is applicable when a Host Employer has a Contract Employer working on the system performing covered work. Transfer is not applicable if a contractor is hired outside of the scope of covered work. Example: Clothing vendor not included.	Host Employer- An employer that operates, or that controls the operating procedures for, an electric power generation, transmission, or distribution installation on which a contract employer is performing work covered by this section.
							When OSHA promulgates new safety and health standards, it does so against this background principle that employers share responsibility for working conditions, and thus for OSHA compliance, at multiemployer worksites. pg. 20354	Contract employer- An employer, other than a host employer, that performs work covered by this section under contract.

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
							OSHA does not require the host employer to report any information to the contract employer in writing; OSHA will deem it sufficient for the host employer to provide the necessary information through any appropriate mechanism (for example, a phone call or an email), to an authorized agent of the contractor. pg.20362	
	1910.269(a)(3)(if)(A)	1926.950(c)(1)(i)	System characteristics	New	Added host employers shall inform contract employers of the characteristics of the host employer's installation	Characteristics of the system include but is not limited to the following:	OSHA presumes that host employers have this information because they typically need it for the design and operation of an electric power generation, transmission, or distribution system. In an unusual case in which the host employer does not have this information in existing records, it must obtain the information for purposes of complying. pg. 20361	
	1910.269(a)(4) referenced	*1926.950(d) referenced*	System characteristics	New		Nominal voltage of lines and equipment	For example: Electrical contractor may be able to make a reasonable estimate of the nominal voltage on a line through examination of the equipment. However, having the host employer provide that information to the contractor eliminates guesswork and the hazards associated with inaccurate estimates. pg. 20360	

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	1910.269(a)(4) referenced	*1926.950(d)(2) referenced*	System characteristics	New		Known maximum switching-transient voltages	Contractors will usually be unable to determine the maximum switching transient overvoltage's on a power line without information from the host employer. The maximum per- unit transient overvoltage determines the minimum approach distance for workers to maintain from exposed, energized parts (see the discussion of this issue under the summary and explanation of final §1926.960(c)(1) later in this section of the preamble). Without this information from the host, a contractor might not adhere to the proper minimum approach distance and, as a result, a power line worker might come too close to the power line and be at risk of serious injury from electric shock and burns. pg. 20360	
	1910.269(a)(4) referenced	*1926.950(d)(3) referenced*	System characteristics	New		Known hazardous induced voltages	Employers can make determinations about the presence of hazardous induced voltages, as well as the presence and condition of grounds, without taking measurements. It may be necessary for employers to make measurements when there is doubt about the condition of a ground or the level of induced or transient voltage if the employer is relying on one of these conditions to meet other requirements in the standard. For example, an engineering analysis of a particular installation might demonstrate that the voltage induced on a deenergized line is considerable, but should not be dangerous.	

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	1910.269(a)(4) referenced	*1926.950(d)(4) referenced*	System characteristics	New		Known presence of protective grounds and equipment grounding conductors		
	1910.269(a)(4) referenced	*1926.950(d)(5) referenced*	System characteristics	New		Known locations of circuits and equipment, including supply lines, communication lines and fire-protective signaling circuits.		
	1910.269(a)(4) referenced		System characteristics	New		Other known system information related to safety and requested by the contractor.		
	1910.269(a)(4) referenced		Required Assessments	New		Known system design information needed for required assessments. Assessments include the following:		
	1910.269(a)(4) referenced		Required Assessments	New		Whether an enclosed space must be entered as a permit-required confined space.	Type of information could include whether an enclosed space contains hazards other than electrical and atmospheric hazards that could endanger an entrant. pg. 20361	
	1910.269 (e)(12) referenced		Required Assessments	New		Whether forced air ventilation has been maintained long enough that a safe atmosphere exists.	Type of information could include the size of the enclosed space. pg. 20361	
	1910.269(l)(3)(if) referenced		Required Assessments	New		What is the MAD for the work to be performed.	Type of information provided could include the operating conditions for the value of maximum transient overvoltage ("T" factor). The Host can provide the "T" factor or give system information so the contractor can calculate "T" factor. pg. 20361	
	1910.269(l)(8)(if) referenced		Required Assessments	New		Whether employees are exposed to hazards from flames or electric arcs.	Type of information provided could include the information on electric equipment and lines relating to the required arc hazard assessments. The Host can provide the arc hazard analysis or the information required to complete an assessment. pg. 20361	

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	1910.269(l)(8)(ii)referenced		Required Assessments	New		What is the estimated incident energy from an electric arc.	Type of information provided may include electrical parameters needed to calculate incident energy. The Host can provide the arc hazard analysis or the information required to complete an arc hazard analysis. pg. 20361	
	1910.269(l)(12)referenced		Required Assessments	New		Whether devices are designed to open or close circuits under load conditions.	Type of information provided could include load current and the opening and closing ratings of devices used to open and close circuits under load. pg. 20361	
	1910.269(m) and (w)(7)referenced		Required Assessments	New		What are known sources of electric energy, including back feed, supplying electric circuits.	Type of information provided could include known sources of back feed. Consider large customers that may have alternate feed sources that may affect contractor safety, etc. pg. 20361	
	1910.269(d) referenced		Required Assessments	New		What are the sources of hazardous energy including potentially hazardous stored or residual energy.	Type of information provided could include all sources of hazardous energy. Consider capacitor installations that may affect contractor safety, etc. pg. 20361	
	1910.269(n)(4)(i) referenced		Required Assessments	New		Whether protective grounds have adequate current carrying capacity.	Type of information provided could include the maximum fault current and clearing times for circuits so contractors could size grounds appropriately. pg. 20361	
	1910.269(n)(7) referenced		Required Assessments	New		Whether there is a possibility of hazardous transfer of potential should a fault occur.	Type of information provided could include potential rise on remote ground under fault conditions. pg. 20361	
	1910.269(q)(1)(i) referenced		Required Assessments	New		Whether overhead structures, poles and towers, are capable of sustaining stresses imposed by work.	Type of information provided could include the design strength of poles and other structures. pg. 20361	

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	1910.269(a)(3)(i)(B)		Installation conditions	New	Added host employers shall inform contract employers of conditions related to the safety of work performed and that are known by the host employer	Conditions of the installation include but are not limited to the following:	Conditions of the installation, including the condition of protective grounds and equipment grounding conductors, the condition of poles, and environmental conditions relating to safety, are worksite conditions. In some cases, the employer already will have information on the condition of the installation, such as information on the condition of poles from pole-inspection programs or on the condition of electric equipment from equipment manufacturers. In the unusual case, the conditions are not known they will be determined by employees through an inspection at the worksite. This inspection need not be overly detailed, but it does need to be thorough rather than cursory. Employers are required to provide information on worksite- specific conditions and the characteristics of the installation to the employee-in-charge. pg. 20367	
	1910.269(a)(4) referenced		Installation conditions	New		Known condition of protective grounds and equipment grounding conductors.		
	1910.269(a)(4) referenced		Installation conditions	New		Known condition of poles.	Example: Pole inspection program details that may affect contractor safety. pg. 20367	
	1910.269(a)(4) referenced		Installation conditions	New		Known environmental conditions relating to safety.	Example: A manhole that may be filled with water or other potentially hazardous atmosphere, etc.	

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	1910.269(a)(3)(ii)(A)		Contractor responsibilities	New	Added requirements for Contract Employers to communicate with their employees concerning hazardous conditions relating to their work as communicated by the Host Employer.	Requires Contract Employers to provide information obtained from host employer to field personnel, etc. concerning known conditions.		
	1910.269(a)(3)(ii)(B)		Contractor responsibilities	New	Added requirement for Contract Employer to communicate unique hazardous conditions that their work may present to the Host Employer.	Requires contract employers to communicate to host employers hazardous conditions their work may present.	Example- Contractor hired to reconductor a substation. Changes in system conditions, open points, closed points, alternate feeds, etc. must be communicated to the Host Employer.	
	1910.269(a)(3)(ii)(C)		Contractor responsibilities	New	Added requirement for Contract Employer to provide information to Host Employer within 2 days after discovering a hazardous condition.	Enable host employers to protect their own employees from hazardous conditions presented by the contractor's work.	Example- The grounding system available at an outdoor site may be damaged by weather or vehicular traffic, or communications cables in the vicinity could reduce the approach distance to an unacceptable level. To protect employees from such adverse situations, conditions affecting safety that are present in the work area should be known so that appropriate action can be taken. pg. 20366	
	1910.269(a)(3)(iii)		Contractor responsibilities	New	Added requirement for the Contract Employer and the Host Employer to coordinate their work rules and procedures so each employee is protected as required by 1910.269.		Each employer has independent responsibility for complying with the OSHA rules. OSHA does require host employers and contract employers to confer in an effort to select work rules and procedures that comply with OSHA. pg. 20366	
Subset- Existing characteristics and conditions	1910.269(a)(4)		Existing (No Suggestions) and Conditions	Updated	Updated name and terms and formatting to Existing characteristics and Conditions			
1910.269(b) Medical services and first aid								

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
Medical services and first aid	1910.269(b)	1926.951	Medical services and first aid	Updated	Updated section			
	1910.269(b)(1)	1926.951(b)	First Aid training	Updated	Updated name to First-aid training from CPR.		OSHA decided not to include a requirement for AEDs in the final rule because the Agency believes that there is insufficient evidence in the record that AEDs exposed to the environmental extremes typical of work covered by Subpart V and §1910.269 would function properly when an incident occurs. pg. 20370	First-aid training- Training in the initial care, including cardiopulmonary resuscitation (which includes chest compressions, rescue breathing, and, as appropriate, other heart and lung resuscitation techniques), performed by a person who is not a medical practitioner, of a sick or injured person until definitive medical treatment can be administered.
	1910.269(b)(1)(i)	Not in construction standard	3 month training allowance	Updated	Field work involving two or more employees at a work location at least two trained persons shall be available	Removed the 3 month extension allowance for new hires except for non-qualified line-clearance tree trimming operations.	OSHA decided to restrict the exception permitting a 3-month delay in training employees in first aid, including CPR, to line-clearance tree trimming. OSHA agrees that turnover in the line-clearance tree trimming industry remains high, which is the underlying reason for the 3-month delay in training for newly hired employees. pg. 20371	
	1910.269(b)(1)(ii)	1926.951(b)(2)	Fixed work locations			Changed fixed work locations example from generating stations to substations.		
	1910.269(b)(3)	Refers to 1926.50 Medical services and first aid	First aid kit	Updated	Added requirements for employers to maintain first aid kits readily available for use and inspect the kits frequency enough to ensure expended items are replaced. The employer shall also inspect each first aid kit at least once a year.	Places the responsibility on the employer to ensure kits are readily available, maintained and inspected.		
	1910.269(c) Job briefing							
Job Briefing	1910.269(c)	1926.952		Updated	Updated formatting			

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	1910.269(c)(1)(i)	1926.952(a)(1)	Job briefing	Updated	Requires the employer to provide information relating to existing characteristics and conditions to the employee in charge of the job.	Employers have responsibilities to ensure the employee in charge has details as outlined in existing characteristics and conditions.	The type of information the employer must provide ensures employees in charge are provided with information relevant to selecting appropriate work practices and protective equipment as required by OSHA. pg. 20371	
				1910.269(d) Hazardous Energy Control (Lockout/Tagout) Procedures				
Lockout/Tagout	1910.269(d)	Not in construction standard	Generation LOTO	No Change				
				1910.269(e) Enclosed spaces				
Enclosed Spaces	1910.269(e)	1926.953	Enclosed space	Updated	Added requirements for the employer responsibility for determining vented vaults, enclosed spaces and permit-required confined spaces.	Employer responsibility		Enclosed space- A working space, such as a manhole, vault, tunnel, or shaft, that has a limited means of egress or entry, that is designed for periodic employee entry under normal operating conditions, and that, under normal conditions, does not contain a hazardous atmosphere, but may contain a hazardous atmosphere under abnormal conditions. Note to the definition of ''enclosed space'': The Occupational Safety and Health administration does not consider spaces that are enclosed but not designed for employee entry under normal operating conditions to be enclosed spaces for the purposes of this section. Similarly, the Occupational Safety and Health Administration does not consider spaces that are enclosed and that are expected to contain a hazardous atmosphere to be enclosed spaces for the purposes of this section. Such spaces meet the definition of permit spaces in §1910.146, and entry into them must conform to that standard.
	1910.269(e)(4)	1926.953(e)	Evaluating potential hazards	Updated	Updated name to Evaluating potentials hazards. Updated wording in note to read easier.			

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	1910.269(e)(5)	1926.953(f)	Removing covers	Updated	Updated name to Removing covers.			
	1910.269(e)(7)	1926.953(h)	Attendant	Updated	Changed term person with first-aid training to attendant with first-aid training to be stationed outside an enclosed space to provide assistance in the area of the opening. Added an attendant duty to ensure it is safe for employees to enter and exit the space.		OSHA requires the attendant to remain immediately available outside the enclosed space during the entire entry. If the attendant were permitted to enter the enclosed space during entry, he or she might not be able to assist the entrant. For example, if traffic-pattern hazards are present in the area of the opening to the enclosed space and if the attendant enters the space, then both the attendant and the workers he or she is protecting would be vulnerable upon leaving the enclosed space because no one would be present to minimize or control the traffic-pattern hazards. pg. 20378	
	1910.269(e)(8)	1926.953(i)	Calibration of test instruments	Updated	Updated language			
	1910.269(e)(11)	1926.953(l)	Ventilation and Monitoring	Updated	Updated name to Ventilation, and monitoring for flammable gases or vapors.			
	1910.269(e)(12)	1926.953(m)	Specific ventilation requirements	Updated	Requires the employer to be able to demonstrate a safe atmosphere exists before employees are allowed to enter the work area.			
1910.269(f) Excavations								
	1910.269(f)	1926.967(f)		No Change				
1910.269(g) Personal Protective Equipment								
Personal protective equipment	1910.269(g)	1926.954		Updated	Section updated throughout			

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	1910.269(g)(1)	1926.954(a)	PPE Payment	New	Added note in regards to employer payment for PPE required by 1910.269, including fall protection equipment, electrical protective equipment and flame resistant and arc-rated clothing and other PPE required as identified. Referred to 1910.132(h)		pg. 20381	
	1910.269(g)(2)(i)	1926.954(b)(1)(i)	1926 Subpart M	No Change				
	1910.269(g)(2)(ii)	1926.954(b)(1)(ii)	Harness arc exposure	New	Added Personal fall arrest equipment shall be capable of passing a drop test after exposure to an electrical arc when heat energy of 40 ± cal/cm$^{2.}$	Electric arc performance	Personal fall arrest equipment (harnesses and shock absorbing lanyards) meeting ASTM 887-04 or greater are designed to meet the required drop test after 40 + cal/cm2 exposure. Pg. 20383	Fall Restraint- A system that prevents the user from falling any distance.
	1910.269(g)(2)(iii)	1926.954(b)(2)	Fall protection design criteria		Added design requirements for body belts and positioning straps including hardware, buckles, d-rings, snap hooks, belt, positioning straps, dielectric tests, tension tests, buckle test, flammability test, etc.		Based on existing §1926.959 and ASTM F887–04, Standard Specifications for Personal Climbing Equipment, which was the latest edition of the national consensus standard applicable to work-positioning equipment when OSHA developed the proposed rule. Although OSHA is adopting requirements derived from the ASTM standard, the final rule is written in performance-oriented terms. Detailed specifications contained in the ASTM standard, which do not directly impact the safety of employees, are not included in the final rule. OSHA believes this approach will retain the protection for employees afforded by the ASTM standard, while giving employers flexibility in meeting the OSHA standard and accommodating future changes in the ASTM standard without needing to change the OSHA standard. Pg. 20388	Work Positioning Equipment- A system rigged to allow an employee to be supported on an elevated vertical surface and work with both hands free while leaning. Example- work restriction devices.

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	1910.269(g)(2)(iv)	1926.954(b)(3)(i)	Positioning straps	Updated	Changed wording to work-positioning equipment shall be inspected before use each day and not used if it is not in safe working condition.			Personal Fall Arrest Equipment- A system used to arrest an employee in a fall from a working level.
			Inspecting work-positioning equipment	New	Added guidelines for inspecting work-positioning equipment to Appendix F.			
	1910.269(g)(2)(iv)	1926.954(b)(3)(ii)	Fall arrest systems	New	Personal fall arrest systems must meet 1926.502(d).		1926.502(d) is the personal fall arrest system requirements found in the construction fall protection standard Subpart M. In a personal fall arrest system a person cannot free fall more than 6' or hit a lower level at any distance.	
	1910.269(g)(2)(iv)	1926.954(b)(3)(iii)	Fall protection systems	New	Added requirements for the employer to ensure employees use fall protection systems under the following conditions.			

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
			Aerial lifts	New	Aerial Lift- Use a fall restraint system or a personal fall arrest system.	Line clearance tree trimming extension until April 1, 2015. If fall restraint systems are being tested by Line clearance tree trimming extended until January 1, 2016.	If an employer has an employee use a fall restraint system, it must ensure that the lanyard and anchor are arranged so that the employee is not exposed to falling any distance. In addition, for a restraint system to work, the anchorage must be strong enough to prevent the worker from moving past the point where the system is fully extended, including an appropriate safety factor. In a November 2, 1995, letter of interpretation to Mr. Dennis Gilmore, OSHA suggested that, at a minimum, a fall restraint system have the capacity to withstand at least 13.3 kilonewtons (3,000 pounds) or twice the maximum expected force that is needed to restrain the employee from exposure to the fall hazard. OSHA recommended that, in determining this force, employers should consider site-specific factors such as the force generated by an employee (including his or her tools, equipment and materials) walking, slipping, tripping, leaning, or sliding along the work surface. Pg 20384	
	1910.269(g)(2)(iv)	1926.954(b)(3)(iii)(B)	Poles, towers, etc.	New	Poles, Towers or similar structures- Over 4 ft. use a personal fall arrest system, work positioning system, or fall restraint system.	Fall protection is required on June 1, 2015 unless the employer can demonstrate that climbing or changing locations with fall protection is not feasible or creates a greater hazard.		
		1926.954(b)(3)(iii)(C)	Poles, towers, etc.			A qualified climber may free climb until June 1, 2015 if condition such as ice, high winds, structure design, containments,etc., that could cause an employee to lose grip or footing are not present and the employee can safely climb the pole.		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
		1926.954(b)(3)(iii)(B) &(C)	Poles, towers, etc.	Updated	Updated Note 2 requiring the employer to ensure employees are proficient in climbing and the use of fall protection.			
	1910.269(g)(2)(iv)(D)	1926.954(b)(3)(iv)	Work positioning	Added	Added requirement for work-positioning systems to be rigged so an employee can free fall no more than 2 feet.			
	1910.269(g)(2)(iv)(E)	1926.954(b)(3)(v)	Anchorage	New	Anchorages for work positioning shall be capable of supporting at least twice the potential impact load of the employees fall or 3,000 lbs. whichever is greater.		Portable anchorage devices are designed to arrest an employee's fall into work-positioning equipment; thus, the devices almost certainly meet the strength requirements in ASTM F887– 04, which, as noted earlier, are equivalent to OSHA's strength requirements for work-positioning equipment. In fact, the latest edition of the consensus standard, ASTM F887– 12e1, contains equivalent strength requirements for what it calls "wood pole fall restriction devices."151 OSHA has included a note following paragraph (b)(3)(v) of the final rule to indicate that wood-pole fall-restriction devices meeting ASTM F887–12e1 are deemed to meet the anchorage-strength requirement when they are used in accordance with manufacturers' instructions. Pg. 20403	
			Fall restriction	New	Wood pole fall-restriction devices that meet ASTM 887-12 will meet the anchorage strength requirement when they are used according to the manufacturer.			

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(g)(2)(iv)(F)	1926.954(b)(3)(vi)	Double locking snaphooks	New	Added unless a snaphook is a locking type and designed for the following connections they may not be engaged: directly to webbing rope of wire; to each other; to a D ring when another snaphook or connection is attached; to a horizontal lifeline; or to any object that is not compatible in shape or dimension that could cause the snaphook keeper to release.		Allows multiple snap hooks in a D ring when they are compatible and locking type. Pg 20403	
1910.269(h) Portable ladders and platforms								
Portable ladders and platforms	1910.269(h)	1926.955	Portable ladder	Updated	Updated name to Portable ladder and platforms	Changed ladder references throughout the section to portable ladders.		
1910.269(i) Hand and portable power tools								
Hand and portable power tools	1910.269(i)	1926.956	Hand and portable power equipment	Updated	Updated name to Hand and portable power equipment	Changed tool references throughout the section to equipment.		
	1910.269(i)(2)(iii)	1926.956(b)(3)	Hand and portable power equipment	Updated	Updated the requirements for equipment to be connected to a power-supply through an isolating transformer of not more than 50 volts.			
	1910.269(i)(4)(vi)	1926.956(d)(7)	hydraulic leak	Updated	Updated the requirement for employers to ensure employees do not use any part of their bodies to locate, or attempt to stop, a hydraulic leak.			
	1910.269(i)(4)(vii)		hoses	New	Added hoses may not be kinked.			
1910.269(j) Live-line tools								

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
Live-line tools	1910.269(j)	1926.957	Live-Line Tools	Updated	Updated language and referenced consensus standard dates			
				1910.269(k) Materials handling and storage				
Material handling and storage	1910.269(k)	1926.958	Material Handling and Storage	Updated	Updated language.			
				1910.269(l) Working on or near exposed energized parts				
Working on or near exposed energized parts	1910.269(l)	1926.960		No change	No name change			
	1910.269(l)(1)	1926.960(a)	General	Updated	Updated formatting			
	1910.269(l)(2)	1926.960(b)(3)	2 employee rule	Updated	Updated formatting and language			
Subset- Minimum approach distance (MAD)	1910.269(l)(3)(i)	1926.960(c)(1)(i) Table V-2 for ac systems and Table V-7 for dc systems	Minimum approach distance (MAD)	New	Added requirements for employers to establish minimum approach distances no less than the distances computed by Table R-3 for ac systems and Table R-8 for dc systems prior to April 1, 2015.	Added Table R-3- AC Live-Line Work Minimum Approach Distances (MAD)- Table includes equations to calculate MAD distances for 50 V to more than 1,485 kV	For voltages of 169.1 kV and more Table 6,10,11,12 and 13 (found in Appendix B) may be used until February 1, 2016. For voltages 72.6 to 169 kV the employer can assume a maximum TOV of 3.0 per unit until February 1, 2016.	Minimum approach distance- The closest distance an employee may approach an energized or a grounded object. Note to the definition of ''minimum approach distance'': Paragraph (l)(3)(i) of this section requires employers to establish minimum approach distances.
			DC MAD			Added Table R-8- DC Live-Line approach distance with overvoltage factor in meters for air, bare-hand and live-line tool conditions at elevations at or below 3,000 ft.	Table 14, 15, 16,17,18,19,20,21 (found in Appendix B) may be used to determine MAD distances for voltages over 72.6 at or below 3,000 ft. once the employer has determined the maximum anticipated per-unit transient overvoltage, phase to ground, through an engineering analysis,	Statistical spark over voltage- A transient overvoltage level that produces a 97.72-percent probability of spark over (that is, two standard deviations above the voltage at which there is a 50- percent probability of spark over).

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
			Electrical component			Added Table R-4- Electrical component of the minimum approach distance at 5.1 to 72.5 kV.	The electrical component depends on five factors: (1) The maximum voltage, (2) The wave shape of this voltage, (3) The configuration of the ''electrodes'' forming the end points of the gap, (4) The insulating medium in the gap, and (5) The atmospheric conditions. Pg. 20422	Statistical withstand voltage- A transient overvoltage level that produces a 0.14-percent probability of spark over (that is, three standard deviations below the voltage at which there is a 50- percent probability of spark over).
			Altitude factor			Added Table R-5- Altitude correction factor	The altitude correction factor is a multiplier used for altitudes above sea level.	
			Default MAD table for Generation & distribution			Added Table R-6- Alternative minimum approach distances for voltages of 72.5 kV and less (generation & distribution table)	Table may be used as a default table to determine generation & distribution MAD distances provided the worksite is at or below 3000 ft.	
			Default MAD table for Transmission			Added Table R-7- Alternative minimum approach distances for voltages of more than 72.5 kV (transmission table)	Table may be used as a default table to determine transmission MAD distances provided the worksite is at or below 3000 ft.	
	1910.269(l)(3)(ii)	1926.960(c)(1)(ii)	T- factor	New	Added requirements for the employer to determine the maximum anticipated per unit transient overvoltage (t-factor), phase-to-ground. Requires the employer to make engineering analysis data available to OSHA for examination and copying.		When the employer uses portable protective gaps to control the maximum transient overvoltage, the value of the maximum anticipated per-unit transient overvoltage, phase to ground, must provide for 5 standard deviations between the statistical spark over voltage of the gap and the statistical withstand voltage corresponding to the electrical component of the minimum approach distance. Added note referring to Appendix B for information on the calculation method when using portable protective gaps.	

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(i)(3)(iii)	1926.960(c)(1)(iii)	MAD	Updated	Updated the requirement that no employee can approach or take any conductive object closer to exposed energized parts than the employer's established minimum approach distance.			
	1910.269(i)(3)(iii)	1926.960(c)(2)(i)	Rubber gloves and sleeves	Updated	Updated details concerning rubber gloves and sleeves constituting insulation for the energized part where work is performed provided the employee maintains control of the part to prevent exposure to uninsulated body parts.	Rubber gloves and sleeves are considered insulation for the energized part where work is being performed. OSHA added the employee has to maintain control of the part.		
	1910.269(i)(4)(i)	1926.960(c)(2)(ii)	Rubber sleeves	Updated	Updated formatting and language and added the requirements for the employer to ensure employees use rubber insulating sleeves when rubber insulating gloves are used as insulation from energized parts.		Rubber insulating sleeves are not required if exposed energized parts which are not being working on are insulated from the employee; and the employee does not expose his upper arm to contact energized parts when installing the insulation. pg. 20453	
	1910.269(i)(4)(ii)	1926.960(c)(2)(ii)(A)&(B)	MAD	Added	Added requirements for the employer to ensure rubber insulating gloves or rubber insulating gloves and sleeves are put on before entering the established minimum approach distance and not removed until positioned outside of the minimum approach distance.		OSHA used the term "position where he or she cannot reach into the minimum approach distance". OSHA commented that the use of a ground to ground, cradle to cradle rule would be in compliance of this requirement. pg. 20453	

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(l)(5)(ii)	1926.960(d)(2)	MAD	Added	Added when an employee performs work near exposed energized >600 V <72.5 kV and is not wearing insulating or using insulating cover-up or performing work with live-line tools or using live-line bare hand work, the employees must position work so he cannot reach into the established minimum approach distance		pg. 20453	
	1910.269(l)(6)			Updated	Updated language.			
	1910.269(l)(7)	1926.960(f)	Conductive articles	Updated	Updated name to Conductive articles. Updated language			
Subset- Protection from flames and electric arcs	1910.269(l)(8)	1926.960(g)	Protection from flames and electric arcs	New	New section	Appendix E -Protection from flames and electric arcs has been added to assist in developing a compliance plan.		
		1926.960(g)(1)	Hazard assessment	New	The employer is required to assess the workplace to identify employees exposed to hazard from flames or electric arcs.		General assessment guidelines include sources of electric arcs and flames and probability an electric arc or flame will occur.	
	1910.269(l)(8)(i)		Hazard assessment	New			Sources of electric arcs: Consider energized circuit parts not guarded or insulated, switching devices that procedure electric arcs in normal operation, sliding parts that could fault (Rack-mounted breakers), energized equipment that could fail (equipment with damaged insulation or evidence of arcing or overheating), etc. Appendix E	
			Hazard assessment	New			Sources of flames: Consider proximity of employees to open flames and flammable materials in the work area that could be ignited by an open flame or electric arc, etc. Appendix E	

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
			Hazard assessment	New			Probability of an electric arc- Consider an energized parts not guarded or insulated, whether conductive objects can come close or fall onto the energized parts, for exposed, energized circuit parts, whether the employee is closer than the established minimum approach distance, whether the operation of electric equipment with sliding parts could fault during operation, servicing or maintained of the equipment, whether there is evidence of impending failure, such as arcing or overheating, etc. Appendix E	
			Hazard assessment	New			Appendix E- Table 1 provides examples of assessments for various tasks	
	1910.269(l)(8)(ii)	1926.960(g)(2)	Incident energy	New	The employer is required to make a reasonable estimate of employee incident energy exposures.		Appendix E	
			Incident energy	New	Note 1- Refers to Appendix E for guidance on estimating available heat energy. Employers following the guidance in Appendix E will be deemed in compliance . If Appendix E is not used, the method must reasonably predict employee incident energy exposures.	Appendix E- Table 3 provides a chart to select a reasonable incident energy calculation method	One of the following three separate types of electric arcs typically serves as the basis for the methods used to estimate incident energy: single-phase arc in open air, three-phase arc in open air, and three- phase arc in an enclosure (arc in a box). Pg 20465	
			Incident energy	New		Appendix E- Table 4 provides a chart to select a reasonable distance from the employee to the electric arc.		
			Incident energy	New		Appendix E- Table 5 provides a chart to select a reasonable arc gap		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
			Incident energy	New		Appendix E- Table 6 provides clothing values based on incident energy for various fault currents, clearing times and voltages for 4 to 46 kV phase to ground arcs in open air.	Table 6 does not provide clothing values for phase to phase or arc in a box arc. (Underground systems, etc.)	
			Incident energy	New		Appendix E- Table 7 provides clothing values based on incident energy for various fault currents, clearing times and voltages for live line tool exposures phase to ground arcs in open air.	Table 7 does not provide clothing values for phase to phase or arc in a box arcs.	
			Incident energy	New	Note 2- Employers are not required to estimate incident energy exposure for every job task. Broad estimates that cover multiple system areas can be used provided the employer uses reasonable assumptions about the energy-exposure distribution throughout the system.		Incident energy estimates are for normal operating conditions. System updates - As long as any change to the circuit does not increase the fault current or clearing times beyond the fault current and clearing time used in selecting a value from the table, the employer would not have to make additional estimates. pg. 20480	
	1910.269(l)(8)(iii)	1926.960(g)(3)	Clothing- FR and AR clothing	Updated	The employer is responsible for ensuring each employee exposed to hazards from flames and electric arcs does not wear clothing that could melt or ignite and continue to burn.		It is especially important to ensure that employees do not wear undergarments made from prohibited clothing (listed in the note to §1910.269(l)(8)(iii)) even when the outer layer is flame resistant or arc rated. These fabrics can melt or ignite easily when an electric arc occurs. Logos and name tags made from non-flame-resistant material can adversely affect the arc rating or the flame- resistant characteristics of arc-rated or flame- resistant clothing. Such logos and name tags may violate OSHA. Pg. 20690	

2014 OSHA Electric Power Standards

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
			Prohibited clothing	Updated	Note- Updated prohibited clothing to include polypropylene, either alone or in blends. Other fabrics include acetate, nylon, polyester and rayon.		Many arc rated clothing manufactures use blends. OSHA allows blends when the fabric has an effective arc rating, (ATPV or Ebt).	Arc Thermal Performance Value (ATPV)- The incident energy on a material, or a multilayer system of materials, that results in a 50 percent probability that sufficient heat transfer through the clothing is predicted to cause the onset of a second-degree skin burn injury.
								Estimated Break open Threshold (Ebt)- The incident energy on a material or material system that results in a 50 percent probability of break open.
	1910.269(l)(8)(iv)	1926.960(g)(4)	Outer layer of clothing	New	Added requirement for the outer layer of clothing to be flame resistant when an employee is exposed to contact with energized circuit parts >600 V, when an electric arc could ignite flammable material in the work area which could ignite clothing, when molten metal or electric arcs from faulted conductors could ignite clothing, when the incident heat energy exceeds 2 cal/cm^2	Note- Molten metal or electric arcs from faulted conductors that could ignite clothing does not apply when conductors are capable of carrying, without failure, the maximum available fault current for the time the circuit protective device interrupts the fault.	Flame resistant (FR) arc rated (AR) outer wear is required when incident heat energy exceeds 2 cal/cm^2.	

2014 OSHA Electric Power Standards

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(l)(8)(v)	1926.960(g)(5)	Body arc protection	New	Added requirements for covering the entire body with protective clothing and other protective equipment with an arc rating greater than or equal to the estimated heat energy when incident heat energy exceeds 2 cal/cm^2.		Forty-six of the 100 arc-related burn accidents involved burn injuries to an employee's arms. Five of those 100 accidents involved burns to an employee's leg. Forty of those 100 accidents involved burns to an employee's head. The accidents in the rulemaking record and TVA's experience clearly indicate a need to protect all parts of the employee's body. Employees with uncovered skin are at risk of severe injury or death. Requiring protection only for areas covered by clothing would lead to the absurd possibility that an employer would be in compliance if an employee worked without clothing. Therefore, OSHA addresses not only the rating of the clothing, but the extent of protection needed for the employee's body. Accordingly, when employers must provide arc-rated protection to employees, the protection must cover the employee's entire body, with a few exceptions described later. pg 20487	

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(l)(8)(v)(A)	1926.960(g)(5)(i)	Hand arc protection	New	Added hand arc protection requirements	Arc rated hand protection is not required when rubber insulating gloves with protectors are worn or when heavy duty leather gloves are worn for incident heat energy levels less than 14 cal/cm2	As noted in the preamble to the proposal, although neither rubber insulating gloves nor leather protectors have arc ratings, their weight and thickness typically provide greater protection from electric arcs than light-weight flame-resistant clothing . The accident data support this conclusion—none of the burn injuries to employees' hands described in the record involved an employee wearing rubber insulating gloves. In addition, NFPA 70E–2004 recognizes the protection afforded by rubber insulating gloves. Heavy-duty leather work gloves with a weight of 407 gm/m2 (12 oz/yd2) provide protection up to about 14 cal/cm2. Therefore, the final rule recognizes the protection afforded by rubber insulating gloves with protectors, as well as heavy-duty leather work gloves. Pg 20487	
	1910.269(l)(8)(v)(B)	1926.960(g)(5)(ii)	Foot arc protection	New	Added foot arc protection	Arc rated foot protection is not required when heavy duty work shoes or boots are worn.		
	1910.269(l)(8)(v)(C)	1926.960(g)(5)(iii)	Head and face arc protection	New	Added head and face arc protection		Head and face protection may be required for other hazards than arc hazards per 1910.135.	
	1910.269(l)(8)(v)(D)		Single phase arc exposure	New	Added faceshield requirements	**Single Phase exposures**		
	Appendix E	Appendix E	Head and face arc protection	New		Head and face protection is not required for incident heat energy levels between 2-8 cal/cm^2	Hard hats meeting 1910.135 are required, as applicable.	
	Appendix E	Appendix E	Head and face arc protection	New		Arc rated face shield protection with a minimum arc rating of 8 cal/cm^2 is required for single phase open air arcs when the incident heat energy levels are between 9-12 cal/cm^2		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	Appendix E	Appendix E	Balaclava	New		Arc rated hood or faceshield with balaclava is required for single phase open air arcs when the incident heat energy levels are 13 cal/cm^2 or higher.		
	Appendix E	Appendix E	Three arc phase exposures	New		**Three Phase exposures**		
	Appendix E	Appendix E	Head and face arc protection	New		Head and face protection is not required for incident heat energy levels between 2-4 cal/cm^2	Hard hats meeting 1910.135 are required, as applicable.	
	Appendix E	Appendix E	Head and face arc protection	New		Arc rated face shield protection with a minimum arc rating of 8 cal/cm2 is required for three-phase arcs when the incident heat energy levels are between 5-8 cal/cm2		
	Appendix E	Appendix E	Balaclava	New		Arc rated hood or face shield with balaclava is required for three phase arcs when the incident heat energy levels are 9 cal/cm^2 or higher.		
	1910.269(l)(8)(v)(E)	1926.960(g)(5)(v)	Faceshield	New	Added arc rating allowances for head and face protection.	Arc rated faceshield, hoods and balaclavas may be 4 cal/cm2 less than the estimated incident energy for single phase open air exposures.	As of June 2014 hard hats are not arc rating. The arc rating required by OSHA includes face shields, hoods and balaclavas. Industry best practice and NFPA 70E allow face shields to be used for exposures up to 12 cal/cm2 and hoods to be used for exposures over 12 cal/cm2.	
	1910.269(l)(8)(vi)(A)	1926.960(g)(6)(i)	Incident energy	New	Added incident energy completion compliance date	Incident energy calculations must be completed prior to April 1, 2015.	Note-	
	1910.269(l)(8)(vi)(B)	1926.960(g)(6)(ii)	Flames and arc hazard assessment	New	Added Flame resistant (FR) clothing compliance date	Flame resistant (FR) clothing must be purchased and worn as determined through the required assessment prior to April 1, 2015.	If 11 oz or greater cotton pants are worn they must be FR and AR, as determined by April 1, 2015.	
	1910.269(l)(8)(vi)(C)	1926.960(g)(6)(iii)			Added Arc rated (AR) clothing compliance date	Arc rated (AR) clothing must be purchased and worn prior to April 1, 2015 except for AR clothing greater than 8 cal/cm2 by September 1, 2015.		
	1910.269(l)(9)	1926.960(h)	Fuse handling	Updated	Updated language.			

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(l)(10)	1926.960(i)	Covered (noninsulated) conductors	Updated	Updated language.			
	1910.269(l)(11)	1926.960(j)	Non-current-carrying metal parts	Updated	Updated language.			
	1910.269(l)(12)	1926.960(k)	Opening and closing circuits under load	Updated	Updated name. Added closing		This section was updated to include opening and closing circuit under load conditions.	
	1910.269(l)(12)(i)	1926.960(k)(1)	Opening circuits	Updated	Added requirements for employers when circuits are opened	Requires the employer to ensure devices used by employees to open circuits under load conditions are designed to interrupt the current involved.		
	1910.269(l)(12)(ii)	1926.960(k)(2)	Closing circuits	New	Added requirements for employers when circuits are closed.	Requires the employer to ensure devices used by employees to close circuits under load conditions are designed to safely carry the current involved.		
1910.269(m) Deenergizing lines and equipment for employee protection								
Deenergizing lines and equipment for employee protection	1910.269(m)	1926.961		No change	No name change			Clearance (between objects). The clear distance between two objects measured surface to surface.
	1910.269(m)(1)	1926.961(a)	Application	Updated	Updated language.			Clearance (for work). Authorization to perform specified work or permission to enter a restricted area.
	1910.269(m)(2)(i)	1926.961(b)(1)	System operator	New	Added responsibility for the employer to designate one employee in the crew to be in change of the clearance and compliance of OSHA rules.			Deenergized- Free from any electrical connection to a source of potential difference and from electric charge; not having a potential that is different from the potential of the earth. Note to the definition of ‘‘deenergized’’: The term applies only to current-carrying parts, which are sometimes energized (alive).

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(m)(2)(iv)(A)	1926.961(b)(4)(i)	Two or more crews	New	Added requirements for two or more crews working on the same lines or equipment.	Requires crews to coordinate their work activities with a single employee in charge of the clearance and OSHA compliance for all crews. Crews will be required to work as if all employees formed a single crew **or…….**		Designated employee (designated person)- An employee (or person) who is assigned by the employer to perform specific duties under the terms of this section and who has sufficient knowledge of the construction and operation of the equipment, and the hazards involved, to perform his or her duties safely.
	1910.269(m)(2)(iv)(B)	1926.961(b)(4)(ii)	Two or more crews	New		**or….** Each crew is required to independently comply with OSHA rules concerning deenergized lines and equipment. When no system operator is in charge, each crew is required to have separate tags and coordinate deenergizing and reenergizing the lines and equipment with other crews.		
	1910.269(m)(2)(v)	1926.961(b)(5)	Public safety	Updated	Updated employer responsibilities	Added employer responsibility to render any disconnecting means in the public inoperable while the disconnecting means are open for employee protection.		
	1910.269(m)(3)(i)			Updated	Updated language.			
	1910.269(m)(3)(ii)	1926.961(c)(2)	Tagging process	Updated	Updated employer responsibilities	Added employer responsibilities for ensuring lines and equipment are opened, rendered inoperable and tagged at all switches, disconnectors, jumpers, tags and other know sources of energy to indicate employees are at work		
	1910.269(m)(3)(iii)	1926.961(c)(3)	Automatic or remote controlled switches	Updated	Updated employer responsibilities	Added employer responsibilities for ensuring automatic and remote control switches are tagged at the points of control and for rendering the automatic or remote control feature inoperable, unless design will not allow.		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(m)(3)(iv)	1926.961(c)(4)	Network protector	New	Updated to include rules for network protectors	Network protectors- Tags are not required on a network protector for work on the primary feeder for the network's protector associated network transformer when the employer can demonstrate all of the following:		
	1910.269(m)(3)(iv)(A)	1926.961(c)(4)(i)	Network protector	New		Every network protector is maintained so it will immediately trip open if closed when a primary conductor is deenergized;		
	1910.269(m)(3)(iv)(B)	1926.961(c)(4)(ii)	Network protector	New		Employees cannot manually place any network protector in a closed position using tools and any manual override position is blocked, locked or otherwise disabled; and		
	1910.269(m)(3)(iv)(C)	1926.961(c)(4)(iii)	Network protector	New		The employer has procedures for manually overriding any network protector before anyone places a network protector in a closed position, that the line connected to the network protector is not deenergized for employee protection; and (if the line connected to the network protector is not deenergized for the protection of any employee working on the line) the primary conductors for the network protector are energized		
	1910.269(m)(3)(vi)	1926.961(c)(6)	Testing after deenergizing	Updated	Added employer responsibilities	Added employer responsibility to ensure lines and equipment are deenergized by testing with a device designed to detect voltage.		
	1910.269(m)(3)(vii)	1926.961(c)(7)	Grounding	Updated	Added employer responsibilities	Added employer responsibility to ensure the installation of protective grounds.		
	1910.269(m)(3)(viii)	1926.961(c)(8)	Deenergized	Updated	Updated language.	Changed language from "lines and equipment involved may be work as deenrgized" to "lines and equipment involved may be considered deenergized".		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(m)(3)(ix)	1926.961(c)(9)	Transfer clearance	Updated	Updated language	Combined language to read smoothly.		
	1910.269(m)(3)(x)(A)	1926.961(c)(10)(i)	Release clearance	Updated	Updated language	Changed language to notify each employee under a clearance of the pending release of the clearance.		
	1910.269(m)(3)(x)(B)	1926.961(c)(10)(ii)	Release clearance	Updated	Updated language	Changed language to "ensure" all employees under a clearance are clear of lines and equipment.		
	1910.269(m)(3)(x)(C)	1926.961(c)(10)(iii)	Release clearance	Updated	Updated language	Changed language to "ensure" all protective grounds protecting employees under the clearance have been removed.		
	1910.269(m)(3)(xi)	1926.961(c)(11)	Release clearance	Updated	Updated language	Changed language to "only the employee in charge who requested the clearance may release the clearance , unless the employer transfers responsibility…..".		
	1910.269(m)(3)(xii)	1926.961(c)(13)	Reenergizing lines	Updated	Added employer responsibilities	Added employer responsibility to ensure no one initiates action to reenergize lines and equipment at a point of disconnection until all protective grounds have been removes, all crews working on the lines and equipment release their clearances, all employees are clear of the lines and equipment and all protective tags are removed from the point of disconnection.		
1910.269(n) Grounding for the protection of employees								
Grounding for the protection of employees	1910.269(n)(1)	1926.962	Grounding	Added note	Added note relating to the application of grounding paragraph to include generation, transmission and distribution lines and equipment when required by 1910.269 and when the employer chooses to ground lines and equipment for employee protection.			Grounded- Connected to earth or to some conducting body that serves in place of the earth.

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(n)(2)	1926.962(b)	Grounding	Updated	Added employer responsibilities	Added employer responsibility to ensure lines and equipment are deenergized and proper grounding of the lines and equipment is completed as in paragraph (n) for any employee to work on transmission and distribution lines or equipment.		
	1910.269(n)(2)(i)	1926.962(b)(1)	Grounding	Updated	Added employer responsibilities	Added employer responsibility to ensure lines and equipment are deenergized as required in paragraph (m).		
	1910.269(n)(3)	1926.962(c)	Equipotential zone	Updated	Added employer responsibilities	Added employer responsibility to demonstrate that temporary protective grounds are placed and arranged to prevent each employee from being exposed to hazardous differences in electric potential.		
				Added	Added Note	Added note to refer to Appendix C for guidelines for establishing required equipotential zones. Added OSHA will deem grounding practices meeting the guidelines in Appendix C as complying with the requirements.		
	1910.269(n)(4)	1926.962(d)(2)	Grounding equipment	Updated	Updated language	Updated language and added latest consensus standard, IEEE Std 1048-2003 for guidelines for selecting and installing protective grounding equipment.		
	1910.269(n)(5)	1926.962(e)	Testing after deenergizing	Updated	Added employer responsibilities	Added employer responsibility to ensure to test lines and equipment and verify absence of nominal voltage before installing any ground (unless a previously installed ground is present).		
	1910.269(n)(6)	1926.962(f)	Connecting and removing grounds	Updated	Updated name to Connecting and removing grounds.			

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(n)(6)(i)	1926.962(f)(1)	Attaching grounds	Updated	Added employer responsibilities. Added grounding application requirements.	Added employer responsibility to ensure employees attach the ground end first and then the other end of a protective ground with a live line tool on lines and equipment over 600 volts. When lines and equipment are under 600 volts, the employer may permit the use of insulating equipment other than live-line tools if the employer can ensure the lines and equipment is not energized at the time of the connection or if the employer can demonstrate each employee is protected from hazards that may develop if the line or equipment is energized.		
	1910.269(n)(6)(ii)	1926.962(f)(2)	Removing grounds	Updated	Added employer responsibilities. Added grounding removal requirements.	Added employer responsibility to ensure employees remove the grounding device from the line and equipment with a live line tool on lines and equipment over 600 volts before removing the ground end. When lines and equipment are under 600 volts, the employer may permit the use of insulating equipment other than live-line tools if the employer can ensure the lines and equipment is not energized when the ground is deconnected or if the employer can demonstrate each employee is protected from hazards that may develop if the line or equipment is energized.		
	1910.269(n)(7)	1926.962(g)	Cable terminal	Updated	Added employer responsibilities.	Added employer responsibility to ensure when an employee performs work on a cable at a remote location from the cable terminal, the cable is not grounded at the cable terminal if there a possibility of hazardous transfer of potential should a fault occur		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(n)(8)	1926.962(h)	Temporary grounds removal	Updated	Added employer responsibilities.	Added employer responsibility to permit employees to remove grounds temporarily during tests. Added the requirement to isolate each employee from any hazards involved during the test procedure.		
					1910.269(o) Test and test facilities			
Testing and test facilities	1910.269(o)	1926.963		Updated	Updated language			
	1910.269(o)(2)(ii)	1926.963(b)(2)	Test area training	Updated	Added employer responsibilities.	Added employer responsibility to ensure each employee receives training in safe work practices upon initial assignment to the test area and retraining as required by section (a)(2).		
	1910.269(o)(3)	1926.963(c)		Updated	Updated name to Safeguarding of test areas.			
	1910.269(o)(3)(i)	1926.963(c)(1)	Test area access	New	Added employer requirements	Added employer requirements to provide safeguarding within test areas to control access to test equipment or to apparatus under test that could become energized as part of testing by direct or inductive coupling and to prevent accidental employee contact with energized parts.		
	1910.269(o)(3)(ii)	1926.963(c)(2)	Permanent test areas	Updated	Added employer requirements	Added employer responsibility to guard permanent test areas to keep employees out.		
	1910.269(o)(3)(iii)	1926.963(c)(3)	Field test areas	Updated	Added employer requirements	Added employer responsibility to ensure one method (outlined in the standard) is used to prevent unauthorized employees from entering a field or temporary test site.		
	1910.269(o)(3)(iii)(A)	1926.963(c)(3)(i)		Updated	Updated language			
	1910.269(o)(3)(iii)(B)	1926.963(c)(3)(ii)		Updated	Updated language			
	1910.269(o)(3)(iii)(C)	1926.963(c)(3)(iii)		Updated	Updated language			

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(o)(3)(iv)	1926.963(c)(4)	Safeguard removal	Updated	Added employer requirements	Added employer requirements to ensure the removal of safeguards when employees no longer needs the protection.		
	1910.269(o)(4)(i)(A)	1926.963(d)(1)(i)	Maintain ground potential	Updated	Added employer responsibility	Added employer requirements to maintain all conductive parts accessible to the test operator at ground potential while the equipment is operating at high voltage.		
	1910.269(o)(4)(ii)	1926.963(d)(2)	Personal grounds application at test sites	Updated	Added employer responsibility	Added employer requirements to ensure visible personal grounds are applied automatically or by an employee manually using properly insulated tools to high voltage circuits after they are energized and before employees perform work on the circuit or apparatus under test.		
	1910.269(o)(4)(iii)	1926.963(d)(3)	Isolated ground return conductor	Updated	Added employer responsibility	Added employer requirements to provide an isolated ground return conductor system designed to prevent intentional passage of current from occurring in the ground grid or in the earth.		
	1910.269(o)(4)(iii)(A)	1926.963(d)(3)(i)	Isolated ground return conductor	Updated	Added employer responsibility			
	1910.269(o)(4)(iii)(B)	1926.963(d)(3)(ii)	Step and touch potentials	Updated	Added employer responsibility	Added employer requirements to protect employees from hazardous step and touch potentials that could develop during tests.		
	1910.269(o)(4)(iv)		Equipment grounding conductor	Updated	Updated language			
	1910.269(o)(4)(v)	1926.963(d)(4)	High voltage terminal grounds	Updated	Added employer responsibility	Added employer requirements to ensure when any employee enters the test area after equipment is deenrgized, a ground is place on the high-voltage terminal and any other exposed terminals.		
	1910.269(o)(4)(v)(A)		Discharge high capacitance equipment	Updated	Updated language			

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(o)(4)(vi)	1926.963(d)(6)	Test vehicle grounds	Updated	Added employer responsibility	Added employer requirements to ground the chassis of a test trailer or test vehicle when used for field testing.		
	1910.269(o)(5)(i)	1926.963(e)(1)	Grounded metallic sheath	Updated	Added employer responsibility	Added employer requirements to not run control wiring, meter connections, test leads or cables from a test area unless contained in a grounded metallic sheath and terminated in a grounded metallic enclosure or unless the employer can demonstrate equivalent employee safety.		
	1910.269(o)(5)(ii)	1926.963(e)(2)	Isolate assessable terminals	Updated	Added employer responsibility	Added employer requirements to isolate meters and other instruments with accessable terminals from test personnel to protect against hazards such as terminals and parts becoming energized during testing. If the employer provides isolation by locating test equipment in metal compartments with viewing windows, the employer must provide interlocks to interrupt the power supply if the compartment cover is opened.		
	1910.269(o)(5)(iii)	1926.963(e)(3)	Temporary wiring	Updated	Added employer responsibility	Added employer requirements to protect temporary wiring and connects against damage, accidental interruptions and other hazards. To the maximum extent possible, the employer is responsible for keeping signal. Control, ground, and power cables separate from each other.		
	1910.269(o)(6)(i)		Safety check	Updated	Updated language			
	1910.269(o)(6)(ii)(A)	1926.963(f)(2)(i)	Safety check	Updated	Updated language			
	1910.269(o)(6)(i)(C)	1926.963(f)(2)(iii)	Safety check	Updated	Updated language			
	1910.269(o)(6)(ii)(F)	1926.963(f)(2)(vi)	Safety check	Updated	Updated language			
1910.269(p) Mechanical equipment								
Mechanical equipment	1910.269(p)(1)(ii)	1926.959	Obstructed view	Updated	Updated language			

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(p)(4)(i)	1926.959(d)(1)	Minimum approach distance (MAD)	Updated	Updated language	Added language. The insulated portion of an aerial lift operated by a qualified employee in the lift is exempt from maintaining MAD if the applicable **MAD is maintained between the uninsulated portions of the aerial lift and exposed objects having a different electrical potential.**		
	1910.269(p)(4)(iii)(A)	1926.959(d)(3)(i)	Extra Precautions	Updated	Updated language	Added language. Added energized lines **or equipment** exposed to contact shall be covered with insulating protective material that will withstand the type of contact made during the operation.		
	1910.269(p)(4)(iii)(B)	1926.959(d)(3)(ii)	Extra Precautions	Updated	Updated language			
	1910.269(p)(4)(iii)(C)	1926.959(d)(3)(iii)	Extra Precautions	Updated	Updated language			
	1910.269(p)(4)(iii)(C)(1)	1926.959(d)(3)(iii)(A)	Extra Precautions	Updated	Updated language	Added electric equipment to lines		
	1910.269(p)(4)(iii)(C)(2)	1926.959(d)(3)(iii)(B)	Extra Precautions	Updated	Updated language			
1910.269(q) Overhead lines and live-line bare hand work								
Overhead lines and live-line bare hand work	1910.269	**1926.964** Construction rules are formatted differently						
	1910.269(q)(1)(i)	1926.964(a)(2)	Checking structure before climbing	Updated	Updated language			
	1910.269(q)(1)(iv)	1926.964(a)(3)(iii)	Setting and removing poles	Updated	Updated language			
	1910.269(q)(2)(i)	1926.964(b)(1)	Tension stringing method	Updated	Updated language			
	1910.269(q)(2)(ii)	1926.964(b)(2)	Conductors, cables and pulling and tensioning equipment	Updated	Updated language			
	1910.269(q)(2)(iii)	1926.964(b)(3)	Disable automatic-reclosing feature	Updated	Updated language			

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(q)(2)(iv)	1926.964(b)(4)	Induced voltages	Updated	Updated language	Added language. Added temporary protective grounds shall be placed and arranged at locations so that the employer can demonstrate the grounds will prevent exposure of hazardous differences in electric potentials for each employee exposed.		
				New	Added note 1	Added note. If the employer takes no precaution to protect employees from hazards associated with involuntary reactions from electric shock, a hazard exists if the induced voltage is sufficient to pass a current of 1 millampere through a 500 ohm resistor. If the employer protects employees from injury due to involuntary reactions from electric shock, a hazard exists if the resultant current would be more than 6 milliampers.		
				New	Added note 2	Note 2- Refers to Appendix C for guidelines for protecting employees from hazardous differences in electric potential required by paragraph q.		
	1910.269(q)(2)(vi)	1926.964(b)(6)	Load ratings	Updated	Added employer responsibility	Added employer requirements to ensure employees do not exceed load rating of stringing lines, pulling lines, conductor grips, load-bearing hardware and accessories, rigging and hoists.		
	1910.269(q)(2)(vii)	1926.964(b)(7)	Defective pulling lines	Updated	Added employer responsibility	Added employer requirements to repair or replace defective pulling lines and accessories.		
	1910.269(q)(2)(viii)	1926.964(b)(8)	Conductor grips	Updated	Added employer responsibility	Added employer requirements to ensure employees do not use conductor grips on wire rope, unless designed by the manufacturer.		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(q)(2)(ix)	1926.964(b)(9)	Communications	Updated	Added employer responsibility	Added employer requirements to ensure that employees maintain reliable communications between the reel tender and the pulling operator.		
	1910.269(q)(2)(x)	1926.964(b)(10)	Operation of pulling rig	Updated	Updated language			
	1910.269(q)(2)(xi)	1926.964(b)(11)	Working under overhead operations	Updated	Added employer responsibility	Added employer requirements to ensure employees are not directly under overhead operations or on the cross arm while a power driven device is pulling the conductor or pulling line and the conductor or pulling lines is in motion.		
	1910.269(q)(3)(ii)	1926.964(c)(2)	Live-line bare hand training	Updated	Added employer responsibility	Added employer requirements to ensure employees complete training before using or supervising live line bare hand techniques on energized circuits.		
	1910.269(q)(3)(ii)(A)	1926.964(c)(2)(i)	Existing conditions	Updated	Updated language			
	1910.269(q)(3)(ii)(C)	1926.964(c)(2)(ii)	Existing conditions	Updated	Updated language			
	1910.269(q)(3)(iii)	1926.964(c)(3)(i)	Insulated tools and equipment	Updated	Added employer responsibility	Added employer requirements to ensure the insulated equipment, insulated equipment, insulated tools and aerial devices and platforms used by employees are designed, tested and made for live-line barehand work.		
	1910.269(q)(3)(iv)	1926.964(c)(3)(ii)	Insulated tools and equipment	Updated	Added employer responsibility	Added employer requirements to ensure employees keep tools and equipment clean and dry while in use.		
	1910.269(q)(3)(v)	1926.964(c)(5)	Adverse weather conditions	Updated	Added employer responsibility	Added employer requirements to ensure employees do not perform work when adverse weather conditions make work hazardous.		
				Updated	Updated note	Added live-line barehand work is too hazardous to perform during adverse weather conditions (thunderstorms, high winds, snow storms, ice storms, etc.) even after the employer has implemented OSHA required work practices.		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(q)(3)(vi)	1926.964(c)(6)	Bucket liners and electrostatic shielding	Updated	Added employer responsibility	Added employer requirements to provide and ensure that employees use a conductive bucket liner or other conductive device for bonding the insulted aerial device to the energized line or equipment.		
	1910.269(q)(3)(vii)	1926.964(c)(7)	Bonding the employee to the energized part	Updated	Added employer responsibility	Added employer requirements to ensure before the employee contacts the energized part, the employee bonds the conductive bucket liner or other conductive device to the energized conductor by means of a positive connection.		
	1910.269(q)(3)(x)	1926.964(c)(10)	Check controls	Updated	Added employer responsibility	Added employer requirements to ensure employees check all controls (ground level and bucket) before elevating an aerial lift into the work position.		
	1910.269(q)(3)(xii)	1926.964(c)(11)	Body of aerial lift truck	Updated	Added employer responsibility	Added employer requirements to ensure employee ground the body of an aerial lift or barricade the body of the truck and teat it as energized before an employee elevates the boom of an aerial lift.		
	1910.269(q)(3)(xiii)	1926.964(c)(12)	Boom-current test	Updated	Added employer responsibility	Added employer requirements to ensure employees perform a boom-current test before starting work each day, each time during the day when a high voltage is encountered and when changed conditions indicate a need for an additional test.		
	1910.269(q)(3)(xiv)	1926.964(c)(13)	Minimum approach distance (MAD)	Updated	Added employer responsibility	Added employer requirements to ensure employees maintain MAD, from all grounded objects and from lines and equipment at a potential different from which the line-line barehand equipment is bonded, unless insulating guards cover grounded objects and other lines and equipment.		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(q)(3)(xv)	1926.964(c)(14)	Approaching, leaving and bonding to energized part	Updated	Added employer responsibility	Added employer requirements to ensure employees maintain MAD, when approaching, leaving or bonding to an energized circuit between the employee and any grounded parts including the lower boom and portions of the truck and between the employee and conductive objects energized at a different potential.		
	1910.269(q)(3)(xvi)	1926.964(c)(15)	Positioning bucket near energized buding or insulator string	Updated	Added employer responsibility	Added employer requirements to ensure employees maintain phase-to ground MAD while the bucket is alongside am energized bushing or insulator string between all parts of the bucket and the grounded end of the bushing or insulator string or any other grounded surface.		
	1910.269(q)(3)(xvii)	1926.964(c)(16)	Handlines	Updated	Added employer responsibility	Added employer requirements to ensure employees do not use hand lines between the bucket and the boom or between the bucket and the ground. The employer shall ensure that ropes used for live-line barehand work are not used for any other purpose.		
	1910.269(q)(3)(xviii)	1926.964(c)(17)	Pass uninsulated equipment	Updated	Added employer responsibility	Added employer requirements to ensure employees do not pass uninsulated equipment or materials between pole or structure and an aerial lift while an employee is working from the bucket bonded to an energized part.		
	1910.269(q)(3)(xix)	1926.964(c)(18)	Nonconductive measuring device	Updated	Updated language			
	1910.269(q)(4)(ii)	1926.964(d)(2)	Tag lines	Updated	Added employer responsibility	Added employer requirements to ensure employees use tag lines or other devices to maintain control of tower sections being raised or positioned.		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(q)(4)(iii)	1926.964(d)(3)	Disconnecting load lines	Updated	Added employer responsibility	Added employer requirements to ensure employee do not detach the load line from a member or section until they safely secure the load.		
	1910.269(q)(4)(iv)	1926.964(d)(4)	Adverse weather conditions	Updated	Added employer responsibility	Added employer requirements to ensure, except during emergency restoration procedures, employees discontinue work when adverse weather conditions would make the work hazardous.		
				Updated	Updated note	Added towers and structures work is too hazardous to perform during adverse weather conditions (thunderstorms, high winds, snow storms, ice storms, etc.) even after the employer has implemented OSHA required work practices.		
1910.269(r) Line-clearance tree trimming operations								
Line-clearance tree trimming operations	1910.269(r)(1)(ii)(B)	1926.950(a)(3)	Electrical hazards	Updated	Updated language	Updated tables to R-5 through R-8		
	1910.269(r)(1)(iii)		Electrical hazards	Updated	Updated language	Updated tables to R-5 through R-8		
	1910.269(r)(1)(iv)		Electrical hazards	Updated	Updated language	Updated tables to R-5 through R-8		
	1910.269(r)(1)(v)		Electrical hazards	Updated	Updated language	Updated tables to R-5 through R-8		
	1910.269(r)(5)iv)		Gasoline engine power saws	Updated	Updated language			
			Gasoline engine power saws	Added note	Added note	Added 1910.266 prohibits drop starting chain saws.		
1910.269(s) Communication facilities								
Communication facilities	1910.269(s)(1)(i)	1926.967(k)(1)(ii)	Microwave transmission	Updated	Added employer responsibility	Added employer requirements to post the area with warning signs containing warning symbols when microwave communications systems exceed the radiation-protection guide specified by 1910.97.		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(s)(2)	1926.967(k)(2)	Power-line carrier	Updated	Added employer responsibility	Added employer requirements to ensure employees perform power-line carrier work, in accordance with the requirements pertaining to work on energized lines.		
				1910.269(t) Underground electrical installations				
Underground electrical installations	1910.269(t)	1926.965		Updated	Updated language			
	1910.269(t)(1)	1926.965(b)	Access	Updated	Added employer responsibility	Added employer requirements to ensure employees use a ladder or other climbing devoice to enter and exit a manhole or subsurface vault.		
	1910.269(t)(3)	1926.965(d)(1)	Attendants for manholes and vaults	Updated	Updated name to Attendants for manholes and vaults.	Added vaults to manhole references throughout 1910.269(t)(3)		
	1910.269(t)(3)(ii)	1926.965(d)(2)	Brief entries	Updated	Updated language	Added vaults- An employee may occasionally briefly enter a manhole or vault to provide nonemergency assistance.		
				Updated	Updated language Note 1			
				Updated	Updated Note 2	Added vaults to Note 2- Requires employees entering manholes and vaults containing unguarded, uninsulated energized lines or parts operating at 50 V or more to be qualified.		
	1910.269(t)(3)(iv)	1926.965(d)(4)	Communications	Updated	Added employer responsibility	Added employer requirements to ensure that employees maintain reliable communications through two-way radios or other equivalent means among all employees on the job.		
	1910.269(t)(4)	1926.965(e)	Duct rods	Updated	Added employer responsibility	Added employer requirements to ensure that employees install duct rods in the direction presenting the least hazard and that an employee is positioned at the far end of the duct line being rodded to ensure employees maintain required MAD.		

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	1910.269(t)(5)	1926.965(f)	Multiple cables	Updated	Added employer responsibility	Added employer requirements to identify the cable to be worked by electrical means and to protect cables other than the one being worked on when multiple cables are present in a work area.		
	1910.269(t)(6)	1926.965(g)	Moving cables	Updated	Added employer responsibility	Added employer requirements to ensure employees inspect energized cables being moving for abnormalities.		
	1910.269(t)(7)	1926.965(h)	Protection from faults	Updated	Updated name to Protection from faults	Added vaults to manhole references throughout 1910.269(t)(7)		
	1910.269(t)(7)(i)	1926.965(h)(1)	Cable abnormalities	Updated	Added employer responsibility	Added employer requirements to deenergize cables with one ore more abnormalities that could lead to a fault or be an indication of an impending fault before any employee works in a manhole or vault, except when load conditions and a lack of feasible alternatives require the cable to remain energized. If cables must remain energized, the employer is required to provide employee protection using shields or other devices. Abnormalities include oil or compound leaking from cable or joints, broken cable sheaths or joint sleeves, hot localized surface temperatures of cables or joints, or joints swollen beyond normal tolerance as indications of impending faults.		
	1910.269(t)(7)(ii)	1926.965(h)(2)	Work related faults	New		Added employer requirements to deenergize cables if work performed could cause a fault before any employee works in a manhole or vault, except when load conditions and a lack of feasible alternatives require the cable to remain energized. If cables must remain energized, the employer is required to provide employee protection using shields or other devices.		

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				1910.269(u) Substations				
Substations	1910.269(u)	1926.966		Updated	Updated language			
	1910.269(u)(1)	1926.966(b)	Access and working space	Updated	Added employer responsibility	Added employer requirements to provide and maintain sufficient access and working space about electric equipment to permit ready and safe equipment operation.		
				Updated	Updated Note	Updated note- OSHA will determine whether an installation that does not comply with ANSI standard complies with paragraph (u)(1) based on: whether the installation conforms to ANSI C2 that was in effect when the installation was made, whether the configuration of the installation enables employees to maintain MAD while working on exposed energized parts, and whether the precautions taken when employees perform work on the installation provide protection equivalent to protection provided by access and working space meeting ANSI/IEEE C2- 2012.		
	1910.269(u)(2)	1926.966(c)	Draw-out-type circuit breaker	Updated	Added employer responsibility	Added employer requirements to ensure when employees remove or insert draw-out-type circuit breakers, the breaker is in the open position and the control circuit is rendered inoperable if the design of the equipment permits.		
	1910.269(u)(3)	1926.966(d)	Substation fences	Updated	Updated language	Added when a substation fences is expanded or removed the fence sections shall be isolated, grounded, or bonded as necessary to protect employees from hazardous differences in potential.		
	1910.269(u)(4)	1926.966(e)	Gurading of room and spaces	Updated	Updated name to Guarding of rooms and other spaces containing electric supply equipment.	Added "other spaces" to guarding of rooms references throughout 1910.269(u)(4)		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(u)(4)(iv)	1926.966(4)	Warning signs	Updated	Added employer responsibility	Added employer requirements to display signs at rooms and other spaces entrances warning unqualified persons to keep out.		
	1910.269(u)(4)(v)	1926.966(5)	Entrances to rooms and other	Updated	Added employer responsibility	Added employer requirements to keep each entrance to a room or other space locked, unless the entrance is under observation of a person who is attending for the purpose of preventing unqualified employees from entering.		
	1910.269(u)(5)	1926.966(f)	Guarding of energized parts	Updated	Added employer responsibility	Added employer requirements to provide guards around all live parts operating at more than 150 volts to ground without an insulating covering unless the location of the live parts gives sufficient clearance (horizontal, vertical, or both to minimize the possibility of accidental employee contact.		
				Updated	Updated Note	Updated note- OSHA will determine whether an installation that does not comply with ANSI standard complies with paragraph (u)(1) based on: whether the installation conforms to ANSI C2 that was in effect when the installation was made, whether each employee is isolated from energized parts at the point of closest approach, and whether the precautions taken when employees perform work on the installation provide protection equivalent to protection provided by horizontal and vertical clearances meeting ANSI/IEEE C2- 2012.		
	1910.269(u)(5)(ii)	1926.966(f)(2)	Maintaining guards during operation	Updated	Updated language			

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(u)(5)(iii)	1926.966(f)(3)	Temporary removal of guards	Updated	Added employer responsibility	Added employer requirements to install barriers around the work area before guards are removed to prevent employees who are not working on equipment but are in the area from contacting exposed live parts.		
	1910.269(u)(6)	1926.966(g)	Substation Entry	Updated	Updated language	Added that the job briefing shall cover information on special system conditions affecting employee safety, including the location of energized equipment in or adjacent to the work area and the limits of any deenergized work area.		
					1910.269(v) Generation			
Generation	1910.269(v)(3)	For generation rules see 1910.269	Access and working space			Updated note- OSHA will determine whether an installation that does not comply with ANSI standard complies with paragraph (v)(3) based on: whether the installation conforms to ANSI C2 that was in effect when the installation was made, whether the configuration of the installation enables employees to maintain MAD while working on exposed energized parts, and whether the precautions taken when employees perform work on the installation provide protection equivalent to protection provided by access and working space meeting ANSI/IEEE C2- 2012.		
	1910.269(v)(4)		Guarding rooms and other spaces containing electric supply equipment	Updated	Updated name to Guarding of rooms and other spaces containing electric supply equipment.	Added "other spaces" to guarding of rooms references throughout 1910.269(v)(4)		
	1910.269(v)(4)(iv)		Guarding rooms and other spaces containing electric supply equipment	Updated	Added employer responsibility	Added employer requirements to display signs at rooms and other space entrances warning unqualified persons to keep out.		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(v)(4)(v)		Guarding rooms and other spaces containing electric supply equipment	Updated	Added employer responsibility	Added employer requirements to keep each entrance to a room or other space locked, unless the entrance is under observation of a person who is attending for the purpose of preventing unqualified employees from entering.		
	1910.269(v)(5)		Guarding of energized parts	Updated	Added employer responsibility	Added employer requirements to provide guards around all live parts operating at more than 150 volts to ground without an insulating covering unless the location of the live parts gives sufficient clearance (horizontal, vertical, or both to minimize the possibility of accidental employee contact.		
				Updated	Updated Note	Updated note- OSHA will determine whether an installation that does not comply with ANSI standard complies with paragraph (u)(1) based on: whether the installation conforms to ANSI C2 that was in effect when the installation was made, whether each employee is isolated from energized parts at the point of closest approach, and whether the precautions taken when employees perform work on the installation provide protection equivalent to protection provided by horizontal and vertical clearances meeting ANSI/IEEE C2- 2012.		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(v)(5)(ii)		Guarding of energized parts	Updated	Added employer responsibility	Added employer requirements to provide guards around all live parts operating at more than 150 volts to ground, except for fuse replacement and other necessary access by qualified persons, within a compartment during operation and maintained functions to prevent accidental contact with energized parts and to prevent dropped tools or other equipment from contacting energized parts.		
	1910.269(v)(5)(iii)		Guarding of energized parts	Updated	Added employer responsibility	Added employer requirements to install barriers around the work area before guards are removed to prevent employees who are not working on equipment but are in the area from contacting exposed live parts.		
1910.269(w) Special conditions								
Special conditions	1910.269(w)(1)(i)	1926.967(a)	Capacitors	Updated	Added employer responsibility	Added employer requirements to short circuit capacitors by disconnecting capacitors from energized sources and waiting at least 5 minutes before applying the short circuit.		
	1910.269(w)(1)(ii)	1926.967(a)(1)	Capacitors	Updated	Updated language			
	1910.269(w)(1)(iii)	1926.967(a)(2)	Capacitors	Updated	Added employer responsibility	Added employer requirements to short circuit any line connected to capacitors before the line is treated as deenergized.		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(w)(2)	1926.967(b)	Current transformer secondaries	Updated	Added employer responsibility	Added employer requirements to ensure employees do not open the secondary of a current transformer while energized. If the employer cannot deenergized the primary of the current transformer before employees perform work on an instrument, a relay, or other section of a current transformer secondary circuit, the employer shall bridge the circuit so that the current transformer secondary does not experience an open-circuit condition.		
	1910.269(w)(3)(i)	1926.967(c)(1)	Series streetlighting	Updated	Added employer responsibility	Added employer requirements to ensure employees work on series street lighting circuits in accordance with paragraph (q) or (t) of 1910.269 as appropriate.		
	1910.269(w)(3)(ii)	1926.967(c)(2)	Series streetlighting	Updated	Added employer responsibility	Added employer requirements to deenergize a streetlighting transformer and isolate it or bridge the loop to avoid an open circuit before any employee opens a series loop.		
	1910.269(w)(4)	1926.967(d)	Illumination	Updated	Added employer responsibility	Added employer requirements to provide sufficient illumination to enable employees to perform work.		
	1910.269(w)(5)	1926.967(e)	Protection against drowning	Updated	Added employer responsibility	Added employer requirements to provide and ensure employees use a US coast guard-approved personal floatation device whenever an employee may be pulled or pushed, or might fall, into water and drown.		
	1910.269(w)(6)(ii)	1926.967(g)(1)&(2)	Employee protection in public work areas	Updated	Added employer responsibility	Added employer requirements to place warning signs or flags and other traffic control devices in conspicuous locations to alert and channel approaching traffic before work begins in the vicinity of vehicular or pedestrian traffic. .		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.269(w)(6)(iii)	1926.967(g)(3)	Barricades	Updated	Added employer responsibility	Added employer requirements to use barricades where additional employee protection is necessary.		
	1910.269(w)(6)(iv)	1926.967(g)(4)	Excavated areas	Updated	Added employer responsibility	Added employer requirements to protect excavated areas with barricades.		
	1910.269(w)(6)(v)	1926.967(g)(5)	Warning lights	Updated	Added employer responsibility	Added employer requirements to display warning lights prominently at night		
	1910.269(w)(7)	1926.967(h)	Backfeed	Updated	Updated language			
	1910.269(w)(8)	1926.967(i)	Lasers	Updated	Added employer responsibility	Added employer requirements to install, adjust and operate laser equipment in accordance with OSHA 1926.54.		
1910.137 Electrical Protective Equipment								
Electrical protective equipment	1910.137	1926.97		Updated	Updated tables, consensus standards, language and added new requirements.			
	1910.137(a)(1)(ii)	1926.97(a)(1)	Manufacture and marking of rubber insulating equipment	Updated	Added class 00 gloves	Added 00 rated gloves to table I-4 for maximum voltage of 500 volts.		
	1910.137(b)	1926.97(b)(2)	Equipment current	Added	Added design requirements for other types of electrical protective equipment	Insulating equipment used for the protection of employees shall be capable of withstanding, without failure, the voltages that may be imposed upon it. Includes transient overvoltages, such as switching surges, as well as nominal line voltage.		
	1910.137(c)(2)(vii)(B)	1926.97(c)(2)(vii)(B)	Protector gloves	Added	If the voltage does not exceed 250 volts, ac, or 375 volts, dc, protector gloves need not be used with Class 00 gloves, under limited-use conditions, when small equipment and parts manipulation necessitate unusually high finger dexterity.	Added note- Persons inspecting rubber insulating gloves used under these conditions need to take extra care in visually examining them. Employees using rubber insulating gloves under these conditions need to take extra care to avoid handling sharp objects.		

Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
	1910.137(c)(2)(vii)(C)	1926.97(c)(2)(vii)(C)	Protector gloves	Added	Added any other class of glove may be used without protector gloves, under limited-use conditions, when small equipment and parts manipulation necessitate unusually high finger dexterity but only if the employer can demonstrate that the possibility of physical damage to the gloves is small and if the class of glove is one class higher than that required for the voltage involved.			
	1910.137(c)(2)(vii)(D)	1926.97(c)(2)(vii)(D)	Protector gloves	Added	Added Insulating gloves that have been used without protector gloves may not be reused until they have been tested under the provisions of 1910.137			
	1910.137(c)(2)(xii)	1926.97(c)(2)(xii)	Certification	Updated	The certification shall identify the equipment that passed the test and the date it was tested and shall be made available upon request to the Assistant Secretary for Occupational Safety and Health and to employees or their authorized representatives.			
	Table I-5	Table E-5	Test intervals	Updated	Rubber insulating line hose- Upon indication that insulating value is suspect and after repair.			
	Table I-5	Table E-5	Test intervals	Updated	Rubber insulating covers- Upon indication that insulating value is suspect and after repair.			
1910.136 Foot protection								

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Section Name	OSHA General Industry Standard Number	OSHA Construction Standard Number	Key Word/s	New Updated No Change	New Standard 1910.269	Major Changes	General notes Preamble Page #	Definitions
Foot protection	1910.136	1926.97	Electrical protective footwear	Updated	Removed the requirements to wear protective footwear when exposed to electrical hazards. Added a new statement for protective footwear to be worn after the employer has taken other protective measures and an electrical hazard, such as a static-discharge or electric- shock hazard still remains.			

Summary and Explanation of the final rule- Federal Register page numbers

Standard Name	Page Number	Standard Name	Page Number
Application	20337	Minimum Approach Distances	20417
Training	20344	Protection from Flames and Electric Arcs	20459
Information Sharing	20352	Deenergizing Lines and Equipment for Employee Protection	20502
Medical Services and First Aid	20368	Grounding for the Protection of Employees	20510
Enclosed Spaces	20375	Overhead Lines and Live-Line Barehand Work	20522
PPE and Falls	20381	Underground Electrical Installations	20531
Portable Ladders and Platforms	20404	Substations	20535
Hand and Portable Power Equipment	20405	Special Conditions	20539
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Materials Handling and Storage	20409	1910.137 Electrical Protective Equipment	20629
Mechanical Equipment	20411	1910.269 Electric Power Generation, Transmission and Distribution	20633
Working on or Near Exposed Energized Parts	20416	1926.97 Electrical Protective Equipment	20693
Two-Person Rule	20416	Subpart V Electric Power Transmission and Distribution	20696