

SUBCHAPTER 07F - STANDARDS

SECTION .0600 – COMMUNICATION TOWER STANDARDS

13 NCAC 07F .0601 SCOPE AND APPLICATION

(a) The rules in this Section contain requirements for policies, procedures, and safe work practices to protect employees throughout North Carolina from the hazards of working on communication towers during construction, alteration, repair, operation, inspection, and maintenance activities.

(b) A communication tower is defined as any tower over six feet in height that is used primarily as an antenna or to host one or more antennas. Where the communication tower is affixed to another structure, such as an electrical transmission tower, church steeple, building rooftop, or water tower, the applicable part of any controlling regulation for protection of employees (e.g., 29 CFR 1910.268, 29 CFR 1910.269 and 29 CFR 1926 Subpart V for transmission towers) shall apply up to the point of access to the communication tower. Thereafter, the provisions of this Section shall apply.

(c) The rules in this Section shall not apply to communication towers that are mounted on motor vehicles.

*History Note: Authority G.S. 95-131;
Eff. February 1, 2005.*

13 NCAC 07F .0602 DEFINITIONS

In addition to the definitions set forth in 29 CFR Part 1910 and 29 CFR Part 1926, the following definitions apply throughout the rules in this Section:

- (1) Acceptable Conditions for Access mean the conditions that must exist before the employer grants permission for construction, alteration, repair or maintenance work to be performed on a communication tower. These conditions include the following:
 - (a) Work under the control of a work safety program meeting the requirements of the Rules in this Section; and,
 - (b) Work where an accumulation of snow, ice or other slippery material is not present, except as necessary for the inspection or removal of such material;
 - (c) Notwithstanding the prohibitions outlined in Sub-item (1)(b) of this Rule, if tower emergency maintenance work must be performed where there is an accumulation of snow, ice or other slippery material, the employer shall implement safe work practices (equipment, practices and procedures) that address the hazards known to be associated with tower work to minimize the associated risk to employees while working on the tower structure and the support structure to which it is affixed, where applicable.
- (2) Climbing Facility means a component specifically designed or provided to permit access to the tower structure, such as a fixed ladder, step bolt, or other structural member.
- (3) Competent Person means a person who is trained to identify existing and predictable hazards in the surroundings or working conditions that are hazardous or dangerous to employees, and who has authorization from his employer to take prompt corrective measures to eliminate them, including halting the work as required by the rules in this Section.
- (4) Elevated (High Angle) Rescue means the process by which methods and equipment are utilized in order to gain access to and egress from the location of an injured employee(s) on the tower structure, and lower both the injured employee(s) and the rescuer(s) to the ground safely.
- (5) Fall Protection Equipment means the personal equipment that employees utilize in conjunction with 100% fall protection systems, including connectors, body belts or body harnesses, lanyards and deceleration devices.
- (6) Ladder Safety System means an assembly of components whose function is to arrest the fall of a user, including the carrier and its associated attachment elements (e.g., brackets, fasteners), the safety sleeve, and the body support and connectors, wherein the carrier is permanently attached to the climbing face of the ladder or immediately adjacent to the structure.

- (7) One-Hundred Percent (100%) Fall Protection means each employee exposed to fall hazards above six (6) feet while ascending, descending, or moving point to point, must be protected by fall protection, as described in 13 NCAC 07F .0605(c), at all times.
- (8) Qualified Climber means a person who has, by virtue of knowledge, training, and experience, been deemed qualified in writing by his employer to perform tower work.
- (9) Qualified Person means a person possessing a degree, certificate, professional standing, or knowledge, training, and experience in the field of communication tower work, and who has demonstrated to his employer his ability to resolve problems relating to the subject matter, the work, or the project.
- (10) Safety Sleeve means the part of a ladder safety system consisting of the moving component with locking mechanism that travels on the carrier and makes the connection between the carrier and the body support.
- (11) Site means the communication tower and the surrounding land or property where tower work is being performed.
- (12) Step Bolt means a bolt or rung attached at intervals along a structural member and used for foot placement during climbing or standing.
- (13) Tower Construction means the building of a new tower or structure, or the installation of new equipment on an existing tower or structure.
- (14) Tower Emergency Maintenance Work means the repair, restoration or replacement of any pre-existing device installed on the tower in the interest of public safety, such as, aviation signaling devices and equipment used to transmit or receive broadcast signals.
- (15) Tower Inspection means the procedure in which an employee(s) climb(s) or ride(s) the structure's elevator to visually inspect the tower for potential problems, and test for tower plumbness and guy cable tension.
- (16) Tower Maintenance Work means the replacement in kind of any device on an existing tower, the repair of existing equipment, and painting.

History Note: Authority G.S. 95-131;
 Eff. February 1, 2005;
 Amended Eff. December 1, 2006.

13 NCAC 07F .0603 EMPLOYER RESPONSIBILITIES

- (a) The employer shall require employees to adhere to acceptable conditions for access, as defined by 13 NCAC 07F .0602(1), prior to climbing the tower at heights above six feet.
- (b) The employer shall ensure that at least two employees, including at least one competent person, are on site at all times when employees are exposed to fall hazards above six feet, provided however, an employer shall not be required to have more than two employees on site at any given time.
- (c) A competent person shall visually inspect the tower base for damage, deterioration, structural deficiencies and functionality of safety features and anchorages before employees are allowed to climb the tower at heights above six feet. Additionally, the employer shall ensure that the tower is visually inspected for these items, as it is ascended, to the elevation point where work is being performed.

History Note: Authority G.S. 95-131;
 Eff. February 1, 2005.

13 NCAC 07F .0604 HAZARD IDENTIFICATION AND ASSESSMENT

- (a) In addition to the inspections required by 13 NCAC 07F .0603(c) and 13 NCAC 07F .0605(b), the employer shall conduct a hazard assessment to identify, assess, and control employee exposure to hazards as required by the rules in this Section and any other applicable state or federal statutes, rules or regulations.
- (b) The employer shall perform and document the hazard assessments required by this Rule:
 - (1) Initially and daily for each site prior to permitting employees to climb the structure; and
 - (2) When safety and health information or change in workplace conditions indicates that a new or increased hazard may be present.
- (c) The hazard assessments required by this Rule shall:
 - (1) Be performed by a competent person;

- (2) Evaluate new equipment, materials, and processes for hazards before they are introduced into the workplace; and
 - (3) Identify meteorological conditions that could affect work at heights above six feet on a tower, such as wind, rain, snow or ice.
- (d) If hazards are identified, the employer shall assess the severity of identified hazards and implement means to control such hazards, including providing employees with personal protective equipment (PPE) designed to control the identified hazards and ensuring the proper use of the PPE by the employees.

*History Note: Authority G.S. 95-131;
Eff. February 1, 2005.*

13 NCAC 07F .0605 FALL PROTECTION

(a) General. Prior to employees climbing the tower at heights above six feet, the employer shall ensure that 100% fall protection systems compatible with the tasks assigned are provided, used, and maintained. The rules in this Section shall not require the retrofitting of communication towers; provided, that employees who are exposed to fall hazards above six feet while performing work on communication towers are protected from such hazards by means of a 100% fall protection system.

(b) Pre-Climb Planning and Inspection. In addition to the criteria for pre-climb planning and inspection included in Paragraph (g) of this Rule, the employer shall ensure that the following items occur prior to employees climbing the tower at heights above six (6) feet:

- (1) All climbing jobs shall be planned by a competent person;
- (2) All climbing facilities shall be visually inspected daily at the tower base by a competent person for rust, corrosion, deterioration, or other hazards. Additionally, the employer shall ensure that the climbing facilities are visually inspected for these items, as it is ascended, to the elevation point where work is being performed. If any such hazard is identified during this inspection, employees shall not use the climbing facility until such hazards are abated;
- (3) A competent person shall ensure that all fall protection equipment is inspected prior to each use for wear, damage, defect or other deterioration by employees who have been trained in accordance with 13 NCAC 07F .0609. Defective equipment shall be identified as defective and immediately removed from service;
- (4) Components of a fall protection system and the fall protection equipment utilized by employees shall be compatible with one another and shall be utilized in accordance with the manufacturer's recommendations; and
- (5) The employer shall ensure that the planning and inspections are performed and documented. The documentation shall be maintained on site while work is being performed, and thereafter by the employer at its place of business. The documentation shall include the date of the planning and inspection, the name of the competent person performing the planning and inspection, and the site location.

(c) Fall Protection Systems. In order to comply with the requirements of Subparagraph (a)(1) of this Rule, the employer may permit employees to utilize the 100% fall protection systems described in Paragraphs (d) through (g) of this Rule. If the fall protection systems described therein are not present on the tower, the employer shall not permit employees to climb the tower at heights above six feet unless:

- (1) an alternative means of 100% fall protection is utilized that is at least as effective as the fall protection systems described in Paragraphs (d) through (g) of this Rule;
- (2) an alternative means of access to the work area is utilized such as an aerial lift or elevated work platform; or
- (3) the employer can demonstrate that the requirements for a fall protection plan under Paragraph (i) of this Rule have been met.

(d) Guardrail Systems. The employer shall ensure that guard rail systems and their components that are utilized by employees as a means of 100% fall protection conform to the criteria in 29 CFR 1926.502(b).

(e) Personal Fall Arrest Systems (PFAS). The employer shall ensure that personal fall arrest systems and their components that are utilized by employees as a means of 100% fall protection conform to the criteria in 29 CFR 1926.502(d), and are utilized according to the manufacturer's recommendations. When utilized by employees as an anchorage as part of a PFAS, the employer shall ensure that step bolts and the attachment point to the structure are designed to meet the requirements of an approved anchorage in

accordance with 29 CFR 1926.502(d), and are designed to ensure the connector will not slip off the end of the step bolt.

(f) Positioning Device System. The employer shall ensure that positioning device systems and their components that are utilized by employees as a means of 100% fall protection conform to the criteria in 29 CFR 1926.502(e).

(g) Ladder Safety Systems. The employer shall ensure that, in addition to the applicable criteria in 29 CFR 1926, Subpart X, ladder safety systems and related support systems for fixed ladders that are utilized by employees as a means of 100% fall protection conform to the following criteria:

- (1) Prior to climbing the structure, the employer shall ensure that the employee(s) have tested the ladder safety system for proper operation and that all components utilized with the ladder safety system are compatible;
- (2) To perform the test required by Subparagraph (g)(1) of this Rule, the employee(s) shall:
 - (A) Approach the ladder at the base and connect to the functional safety climb system;
 - (B) Climb to a height less than six feet;
 - (C) Forcibly engage the device without letting go of the ladder;
 - (D) If the device functions as intended, the employee(s) shall begin the ascension;
 - (E) If the device does not function properly, the employee(s) shall immediately descend the structure and shall not utilize the device until it functions properly; and
- (3) If a ladder is obstructed, inhibiting the effective use of the ladder safety system, an alternative means of 100% fall protection shall be utilized that is at least as effective as the types of fall protection described by this Rule.

(h) Fall Protection Plan. This Paragraph applies when employees are working on a structure where no adequate tie-off anchorage point(s) exist, the fall protection systems described in Paragraph (c) of this Rule are not feasible or create a greater hazard, and the work can not be completed utilizing an alternative means of access to the work area such as an aerial lift or elevated work platform. If an employer demonstrates the foregoing conditions are present, then in addition to the criteria in 29 CFR 1926.502(k), the employer shall conform to the following provisions:

- (1) The employer shall ensure that each employee under the fall protection plan has been trained as a qualified climber;
- (2) The fall protection plan shall be made available and communicated to exposed employee(s) prior to the employee(s) beginning work, and such communication shall be documented; and
- (3) The fall protection plan shall identify each location on the tower structure where fall protection methods as described in Paragraph (c) of this Rule cannot be used. As soon as adequate tie-off anchorage points or other fall protection systems can be established, the employer shall utilize any of the fall protection systems described in Paragraph (c) of this Rule.

(i) Emergency and Rescue Procedures.

- (1) The employer shall establish procedures for rescue of employees in the event of an emergency, which shall include whether the employer will designate its own employees to perform the rescue procedures or whether the employer will designate a third-party to perform the rescue procedures. The procedures shall be documented and available for review by the Deputy Commissioner of Labor for Occupational Safety and Health or his designee, upon request.
- (2) Employer to Perform Rescue Procedures. An employer whose employees have been designated to provide elevated (high angle) rescue and emergency services shall take the following measures:
 - (A) Ensure at least two trained and designated rescue employees are on site when employees are working at heights over six feet on the tower, provided however, where there are only two employees on site, then an employer may comply with the requirements of this Part if one employee is a trained and designated rescue employee and one employee has been employed for less than nine months and has received documented orientation from the employer outlining steps to take in an emergency;

- (B) Ensure that personal protective equipment (PPE) and high angle rescue equipment needed to conduct elevated rescues are provided, used and maintained by the designated rescue employees;
 - (C) Train designated rescue employees so they are proficient in the use and maintenance of PPE and high angle rescue equipment needed to conduct elevated rescues; and
 - (D) Train designated rescue employees to perform assigned rescue duties to ensure that they become competent to perform such duties, including conducting simulated rescue operations at least once every 12 months.
- (3) Third-Party to Perform Rescue Procedures. An employer who designates a third-party rescue and emergency service to provide elevated (high angle) rescue and emergency services shall take the following measures:
- (A) Obtain verification from the third-party rescue team or service that it is able to respond to a rescue summons in a timely manner;
 - (B) Obtain verification from the third-party rescue team or service that it is proficient with rescue-related tasks and equipment as they relate to rescuing climbers from elevated heights on communication structures;
 - (C) Select a rescue team or service from those evaluated that has verified it has the capability to reach the victim(s) and is equipped for and capable of performing the needed rescue services;
 - (D) Provide the selected rescue team or service with contact information regarding all towers/structures from which rescue may be necessary so that the rescue service can develop appropriate rescue plans and practice rescue operations as it deems necessary; and
 - (E) Inform the selected rescue team or service, prior to the first day on which employee(s) perform work at heights over six feet on the tower, of the site and location of the tower(s) to be climbed; the hazard(s) identified on the site; the number of employees that will climb the tower(s); the height(s) at which employee(s) will be working; the name(s) and telephone number(s) for any employer contact(s); and, any other information that is requested by the rescue team or service.

(j) First Aid/CPR Training and Supplies. In addition to the requirements of 29 CFR 1910.151 and 29 CFR 1926.50, the employer shall ensure that at least two employees on site are trained and hold current certifications in basic first aid and cardiopulmonary resuscitation (CPR) issued by the American Red Cross or any other organization whose standards are equivalent to the American Red Cross; provided, however, where there are only two employees on site, then an employer may comply with the requirements of this Paragraph if one employee is trained and holds current certifications in basic first aid and CPR and one employee has been designated by the employer as a probationary employee and has been employed for less than six months.

*History Note: Authority G.S. 95-131;
Eff. September 2, 2005;
Temporary Amendment Eff. October 31, 2006;
Amended Eff. February 1, 2007.*

13 NCAC 07F .0606 NON-IONIZING RADIATION

(a) General. Employers shall ensure that employees performing work on communication towers are not exposed to Radio Frequency (RF) Electromagnetic Fields in excess of the Federal Communications Commission (FCC) maximum permissible exposure (MPE) limits for exposure as prescribed in 47 CFR 1.1310.

(b) Protection from Radiation Exposure.

- (1) Employees shall not enter areas where RF exposure levels are above the general population/uncontrolled MPE's described in 47 CFR 1.1310 unless they understand the potential for exposure and can exercise control over the exposure.
- (2) Control Procedures. Prior to employees performing work in areas on a communication tower where RF exposure levels exceed the occupational/controlled MPE values stated in

47 CFR 1.1310, the employer shall enact and enforce written control procedures that provide for the reduction, elimination, avoidance or protection from such RF levels. These written control procedures shall include the following:

- (A) Reducing the transmitter power to a level that ensures RF exposure levels in areas where employees are working do not exceed the occupational/controlled MPE values stated in 47 CFR 1.1310, and that the transmitter power level is not increased until all employees have ceased working in those areas. If this method is chosen, the transmitter power shall be locked out and tagged out at the reduced level by a competent person in accordance with 29 CFR 1910.147. Prior to removing lock out/tag out devices and restoring the original transmitter power level, all employees shall be notified and the work area shall be checked to ensure that all employees have been safely positioned and removed;
- (B) If the transmitter power level in areas where employees are working cannot be reduced and maintained at a level that ensures RF exposure levels do not exceed the occupational/controlled MPE values stated in 47 CFR 1.1310, the transmitter power shall be locked out and tagged out by a competent person in accordance with 29 CFR 1910.147. Prior to removing lock out/tag out devices and restoring the transmitter power level, all employees shall be notified and the work area shall be checked to ensure that all employees have been safely positioned and removed;
- (C) If the transmitter power level can not be reduced or eliminated, an employer may permit its employees to access areas where the occupational/controlled MPE values stated in 47 CFR 1.1310 are exceeded if it implements engineering or administrative controls that comply with the FCC's regulations concerning such exposure, including limiting the duration of the exposure and utilizing monitoring equipment, RF protective clothing and other related PPE; or
- (D) If an employer cannot ensure that the conditions in Parts (A), (B) or (C), of this Subparagraph, are met, employees shall not be permitted to access areas where RF exposure levels exceed the occupational/controlled MPE values stated in 47 CFR 1.1310.

(c) Use of Controls. Prior to commencing work on a communication tower, a competent person shall assess potential RF hazards of areas which may be accessed by employees in the course of their work, and post temporary signage to indicate areas where the RF hazard exceeds the general population/uncontrolled MPE limits for exposure set forth in 47 CFR 1.1310. Temporary signage shall remain in place while work is performed and the hazard exists.

(d) RF Safety Program. When employees are exposed to RF fields in excess of the general population/uncontrolled MPE limits established in 47 CFR 1.1310 as a consequence of their employment, the employer shall develop, implement, and maintain a written safety and health program with site specific procedures and elements based on the electromagnetic radiation hazards present, in accordance with 13 NCAC 07F .0609(g).

*History Note: Authority G.S. 95-131;
Eff. July 28, 2006.*

13 NCAC 07F .0607 HOISTS AND GIN POLES

(a) Hoists. Hoists used during the construction, alteration, repair, maintenance, or demolition of communication towers shall meet the following requirements:

- (1) All hoists shall meet the requirements set forth in this rule, 29 CFR 1910, Subpart N, and 29 CFR 1926, Subpart N, where applicable.
- (2) All hoists shall meet applicable requirements for design, construction, installation, testing, inspection, maintenance, and operation as prescribed by the manufacturer, or a licensed professional engineer.
- (3) Employers shall maintain at the work site the operating manual developed by the manufacturer for the specific make and model hoist being used, as well as documentation for any inspection, testing, and operator training certification required by the rules in this Section,

- (4) An employer shall not operate or permit to be operated a hoist that the employer knows, or reasonably should know, will expose his employee(s) to an unsafe condition which is likely to result in personal injury or property damage.
- (b) Gin Poles.
- (1) Rigging Equipment.
 - (A) Wire rope, slings, chains, shackles, turnbuckles, links, hooks, sheaves, rotating rooster heads, blocks, and hoists, used in a gin pole lifting arrangement shall meet the manufacturer's safe working load limits. In addition, each component shall have a nominal breaking strength of no less than five times the static load applied. Consideration for end fitting losses and actual positioning of connecting parts shall be given;
 - (B) Lugs or other devices for lifting or attaching the gin pole in position shall be designed with load and resistance factors appropriate for their intended use;
 - (C) Only alloy chains marked by the manufacturer with an 8, T, or an A, rated for lifting, shall be used;
 - (D) Only quenched and tempered hooks and shackles shall be used. The manufacturer's load rating shall be stamped on the product; and
 - (E) The breaking strength of the sheave shall equal or exceed the breaking strength of the wire rope intended for the sheave.
 - (2) Gin Pole Use.
 - (A) A user's gin pole load chart shall be provided for each pole;
 - (B) Any special engineered pick, which is outside of the load chart, shall only be allowed at the direction of a licensed professional engineer. Monitoring and measuring conditions, as specified by a licensed professional engineer, shall be provided and used during all special engineered picks;
 - (C) Modifications or repairs of a gin pole shall be made with like or similar materials to meet or exceed the original specifications. Modifications or repairs shall be recertified by a licensed professional engineer; and
 - (D) There shall be a mechanism in place to prevent the gin pole from tipping during the jumping process.
 - (3) Wire Rope. Wire rope used for rigging shall be as follows:
 - (A) Compatible with the sheaves of the rooster head and hoisting blocks;
 - (B) Lubricated in accordance to manufacturer specifications to prevent corrosion and wear;
 - (C) End connections shall be terminated per industry and manufacturer's specifications;
 - (D) Wedge sockets shall have a minimum tail length of one rope lay with a properly torqued clip attached to prevent accidental disengagement; and
 - (E) Flemish eyes shall contain heavy duty thimbles of appropriate size for the wire rope diameter, and shall have a minimum tail length of one rope lay secured with a properly torqued clip at its end.
 - (4) Inspections.
 - (A) Gin poles shall have a documented inspection annually by a qualified person;
 - (B) In addition to the annual inspection, the employer shall designate a competent person who shall visually inspect the gin pole and rigging prior to each use, and during use, to make sure it is in safe operating condition. Any deficiencies shall be repaired before use continues;
 - (C) During each inspection, the qualified or competent person shall inspect the legs and bracing members for bends or distortion;
 - (D) During each inspection, the qualified or competent person shall inspect the straightness tolerances for the overall assembly (including leg and bracing members);
 - (E) During each inspection, the qualified or competent person shall visually inspect the welds for quality, deformation, cracks, rust, or pitting or loss of cross sectional area;

- (F) During each inspection, the qualified or competent person shall inspect the members for excessive rust or pitting or loss of cross sectional area;
- (G) During each inspection, the qualified or competent person shall inspect the sling attachment points for distortion, wear, cracks, and rust;
- (H) During each inspection, the qualified or competent person shall ensure that proper bolts are utilized and all associated hardware is in good condition;
- (I) During each inspection, the qualified or competent person shall inspect side plates on rooster heads for distortion or other damage;
- (J) During each inspection, the qualified or competent person shall inspect all attachment hardware, including rigging and parts such as cables, slings, and sling attachment points, shackles, hooks, and sockets for wear, distortion, cracks, and rust; and
- (K) During each inspection, the qualified or competent person shall ensure that all problems identified during the inspection are corrected before placing the gin pole into service.

*History Note: Authority G.S. 95-131;
Eff. April 1, 2005.*

13 NCAC 07F .0608 RECORD KEEPING

In order to fulfill responsibilities under the provisions of the rules in this Section, the employer shall, upon request, provide the Deputy Commissioner of Labor for Occupational Safety and Health or his designee access to the following records:

- (1) Training Records. All material related to the employer's training and education program, pursuant to 13 NCAC 07F .0609.
- (2) Medical Records and Non-Ionizing Radiation Exposure Records. All medical records (in accordance to 29 CFR 1910.1020(d)(1)(i)) and material related to each analysis using exposure or medical records (in accordance with 29 CFR 1910.1020(d)(1)(iii)).
- (3) Equipment Inspections and Testing Records. All material related to the modification, repair, test, calibration or maintenance service of all equipment.

*History Note: Authority G.S. 95-131;
Eff. February 1, 2005.*

13 NCAC 07F .0609 TRAINING

- (a) In order for employees to work at heights above six feet on a communication tower, they must be approved for such work by a qualified person.
- (b) Competency of the Trainer. Training of employees in communication tower work shall be performed by or under the supervision of a qualified person.
- (c) Written Work Procedures.
 - (1) The employer's written work procedures shall be provided to employees as part of their training.
 - (2) Pictures and symbols may be used as a means of instruction if employee understanding is improved using this method.
 - (3) Manufacturers' operating manuals for personnel hoisting systems satisfy the requirement for operating procedures for the respective equipment, or can serve as the basis for these procedures.
- (d) Hazardous Materials Training. Employees required to handle or use flammable liquids, gases, or toxic materials shall be instructed in the safe handling and use of these materials and made aware of the specific requirements contained in 29 CFR 1926.55 and 29 CFR 1910.1200, as applicable.
- (e) Fall Protection Training.
 - (1) The employer shall provide a training program for each employee who might be exposed to fall hazards.
 - (2) The program shall enable each employee to recognize the hazards of falling and shall train each employee in the procedures to be followed in order to minimize these hazards.

- (3) The employer shall ensure that each employee has been trained by or under the supervision of a qualified person in the following areas:
 - (A) The nature of fall hazards in the work area;
 - (B) The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used;
 - (C) The correct procedures for inspecting fall protection equipment for wear, damage, defect or deterioration.
 - (D) Climbing safety procedures;
 - (E) The use and operation of the fall protection systems utilized by the employer, as described in 13 NCAC 07F .0605(c);
 - (F) The role of each employee in any safety monitoring system being used;
 - (G) The correct procedures for the handling and storage of equipment and materials and the erection of overhead protection;
 - (H) The role of employees in fall protection plans; and
 - (I) The compatibility of fall protection equipment and fall protection systems.
- (f) Hoist Operator Training. The employer shall maintain documentation that the hoist operator has practical training on the hoist he is operating. Training of hoist operators shall meet the requirements of 29 CFR 1910.179 and 29 CFR 1926, Subpart N.
- (g) RF Training.
 - (1) All employees exposed in excess of the general population/uncontrolled MPE limits stated in 47 CFR 1.1310 shall receive RF hazard awareness training by or under the supervision of a qualified person in the following areas:
 - (A) MPE Limits for occupational/controlled exposure;
 - (B) Recognition of RF exposure sources in communication tower work;
 - (C) Proper use and interpretation of RF exposure;
 - (D) Work procedures to avoid excessive RF exposure;
 - (E) Proper use of RF protective clothing and other related PPE;
 - (F) Symptoms and health issues related to RF exposure; and,
 - (G) RF exposure first-aid procedures.
 - (2) Employers shall ensure that each affected employee who works in an electromagnetic energy environment with potential RF exposure in excess of the general population/uncontrolled MPE limits stated in 47 CFR 1.1310 has access to and understands the specific site information related to the RF energy and RF fields present at each individual site.
- (h) Retraining. Unless stated otherwise in this Rule, when the employer or qualified person has reason to believe that any employee who has already been trained does not have the understanding and skill required to safely perform the work assigned, the employer shall retrain each such employee. Circumstances where retraining is required include situations where:
 - (1) Changes in the workplace render previous training obsolete;
 - (2) Changes in the types of fall protection systems or equipment to be used render previous training obsolete; or
 - (3) Inadequacies in an employee's knowledge or use of fall protection systems or equipment indicate that the employee has not retained the requisite understanding or skill.
- (i) Training Records.
 - (1) The employer shall certify that each employee has been trained by preparing a certification record which includes:
 - (A) The identity of the person trained;
 - (B) The signature of the employer or the qualified person who conducted the training; and
 - (C) The date that training was completed.
 - (2) A copy of the training lesson plan for each topic of instruction shall be maintained by the employer.
 - (3) The certification record shall be prepared at the completion of the training required by this Rule and shall be maintained for the duration of the employee's employment.

- (4) The most current certification record shall be kept available for review by the Deputy Commissioner of Labor for Occupational Safety and Health or his designee, upon request.
- (5) An employer may accept training records or certificates for previous training if the employer verifies that all training and knowledge is current and applicable to the new employee's job duties.

History Note: Authority G.S. 95-131;
Eff. February 1, 2005.