May 22, 2025

New Mexico Environmental Improvement Board
c/o The Honorable Phoebe Suina, Chair
1190 St. Francis Drive, Suite N4050
Santa Fe, NM 87505

New Mexico Environment Department
c/o Ms. Kristy Peck, Acting Bureau Chief, Occupational Health and Safety Bureau
1190 St. Francis Drive, Suite N4050
Santa Fe, NM 87505

Re: Opposition to Proposed Regulation 11.5.7 NMADA – Heat Illness and Injury Prevention (No. EIB 25-11)

Dear Chair Suina and Bureau Chief Peck:

On behalf of Advanced Tower Services, LLC, a New Mexico Company directly affected by the 11.5.7 NMADA- Heat Illness and Injury Prevention, our trade association releases the following comment which we, Advanced Tower Services, LLC fully support and request your consideration.

NATE: The Communications Infrastructure Contractors Association represents over 1,000 member companies (mostly small businesses) that construct, service or maintain hundreds of thousands of communication towers, broadband infrastructure, and next generation networks throughout the United States.

- NATE believes that some of the proposed enhanced safety measures, which could include mandatory breaks in a break area away from the work area or work-stoppages, will not be feasible for tower crews who are responsible for climbing and maintaining communications facilities at height. Communications towers do not have sheltered or shaded facilities built onto the towers, and added sheltered areas on towers may require additional structural analysis, which would cause additional cost. Accordingly, mandated work-stoppages would require tower technicians to climb down a tower and into a break area. In these scenarios, safety would be compromised because the proposed rule would require more frequent climbing (every 2 hours) and contribute to fatigue and repetitive stress injuries. Applying the fall protection hierarchy of controls, the most effective measures are applied by eliminating hazards. When workers must descend and ascend a structure multiple times, this creates additional exposures to falls and increasing a hazard.
    - According to the NATE member survey, all respondents indicated that a typical workday involves one climb up the tower and one descent. On average, respondents reported that descending a 200-foot tower to reach a shaded break area, removing and then re-donning PPE, and re-ascending the tower would require approximately 65 minutes.

- NATE respectfully suggests that establishing an arbitrary High Heat Trigger enforcement temperature would be unreasonable in the broadcast and communication tower industry. Tower technicians work at elevation on towers ranging from 100 to 2,000 feet above the ground. OSHA may determine that a High Heat arbitrary heat index is cause for safety mitigation measures; however, while working at elevation, temperatures can vary because of higher wind speeds and is a lower heat index than the index on the ground. NATE believes that monitoring the heat index for all climbers in various locations on the structures cannot be completed with sufficient frequency and accuracy with current measuring equipment due to variation in elevation during the work schedule.

    - The survey found that all respondents currently rely on phone apps to monitor the heat index. However, these apps do not distinguish between conditions at ground level and those at height. None of the respondents reported using a Wet Bulb Globe Thermometer (WBGT) to monitor the heat index, citing practical challenges. The WBGT requires placement in the work environment for 20-30 minutes to equilibrate before providing a reading, making it difficult—if not impossible—to use effectively for crews frequently moving around on the tower.

- NATE believes that establishing a High Heat Trigger enforcement would eliminate the ability for tower crews to complete tall tower maintenance inspections and the ability to "rig" a tall tower as both scopes of work typically exceeds two hours. On anticipated high-heat days, tower crews schedule work expected to exceed two hours on structures, to begin in the early morning or later in the day to reduce exposure during peak heat conditions. Crews are mindful of the cooler temperatures at higher elevations, as shown in Appendix B.

    - Feedback from a NATE member contractor that works predominantly in the Tall Tower Industry: "If you put this in different terms, you might have a better appreciation for how this would impact the safety of our team members, especially in the tall tower industry. Imagine you need to do work at the top of a skyscraper. There is not an elevator, so you need to take the stairs. Before you can climb the stairs, you need to put on 20-30 pounds of safety gear. You climb 1,000 feet in the air which takes you a full 2 hours. At that point you have just got in a position to do the work that may take you an hour or longer to complete. If this new rule goes into place our guys would need to immediately descend the tower to get into a shaded or air-conditioned area. The next time they climbed the steps that day, it would take them even longer given the fatigue. This is not a perfect example, because our crews are not climbing stairs at an angle. They are climbing the equivalent of putting a ladder on the side of skyscraper and climbing straight up, which takes more energy. Furthermore, our crews would have to climb multiple times in 90-degree heat. On jobs that are over 1,000 feet (many of our towers are) we would not even be able to reach the location on the tower to begin work before needing to leave the tower with this proposed policy. Not only would we have significantly increased risk doing this work in the heat, but we could not meet this requirement for most jobs. In the broadcast space we are responsible for maintaining broadcast transmission for the national news and

radio infrastructure. Much of which is mandated from an emergency response perspective by the FCC."

- NATE does not believe that a heat standard based on an arbitrary Heat Trigger ground temperature properly addresses the conditions encountered by tower technicians and fails to provide appropriate workplace safety benefits to tower crews who work at height. Rather, NATE believes that tower technicians should be vigilant about their personal health history, physical conditions, and their ability to acclimate to any new environments. Tower technicians should also follow the heat-related illness guidelines that the Association has developed, as shown in Appendix A, based on NATE members' input.

    - Feedback from NATE member contractors:
        - "More exhaustion and potential hazards from muscle fatigue and water loss from the additional climbing."
        - "Introduces undue risk to our workers."
        - "Additional hazards that will be created to mitigate another. It does not consider the different expectations each industry requires."

- NATE recognizes the importance of heat safety in our industry and developed the *NATE Safety & Health Manual* which includes a chapter on heat-related illnesses (see Appendix A). NATE provides this resource to member companies to aid in the development of in-house training programs that address excessive heat and heat illnesses. NATE's members contributed to the development of heat-related illness safety material and most member companies actively train their workers to follow these safety protocols.

    - Feedback from NATE member contractors:
        - "While well intentioned, implementation of the rule as it is currently written would likely increase the risk of injury in our industry. Repetitive stress injuries are likely to increase which will affect the well-being of workers and increase workers compensation claims."
        - "Foremost is the exposure to our climbers of greater hazards than they typically need. The actual task of climbing poses more risk than at the work area and this approach exposes them to it more often. When the repetitive motion and exertion level is factored in, I believe that this proposed rule will make our jobsites more dangerous."

- Factors that tower technicians must consider every day include one's physical condition, the weather (including such heat-related variables as temperature, wind, and humidity), clothing worn, quickness of movement and how much physical demand is being placed on the body (lifting, heavy work), if there is air circulation over the body, whether the person is in direct sunlight and if they are taking any medication(s) that may contribute to a heat-related illness. Employees currently effectively manage their responsibilities by drinking adequate amounts of hydrating fluids, avoiding hot beverages during lunch and afternoon breaks, and notifying their employer of any medications or medical conditions that could affect their susceptibility to heat illness.

    - Feedback from NATE member contractors:

        - There are better methods for our climbers to address heat stress than creating more work and stress for them in a high heat environment.
        - There are several ways to combat the heat index while performing the work, not just for break time. Focus should be on hydration and other heat illness mitigation steps.

- OSHA states break areas must be “readily accessible” which is defined as: "capable of being reached quickly for operation, renewal, or inspections, without requiring those to whom ready access is requisite to climb over..., or to resort to portable ladders..., etc.” Descending a structure to access a break area does not meet the definition of readily accessible.

    - Feedback from NATE member contractors:
        - No one will follow it as it provides zero benefit. This will open a door to companies receiving citations.
        - It poses more of a threat than helping workers, exhaustion and heat stress will be more of a factor climbing up and down.

Sincerely,

Kari Candelaria

Kari Candelaria

General Manager

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Appendix A

THE COMMUNICATIONS INFRASTRUCTURE CONTRACTORS ASSOCIATION

Chapter 58 - Heat Illness Prevention Program

Chapter 58 Heat Illness Prevention Program

1.0 Purpose/Scope

Purpose - The purpose of this policy is to ensure that all (INSERT COMPANY NAME) employees, working in outdoor telecommunication worksites or in other indoor/outdoor areas when environmental risk factors for heat illness are present, are protected from heat illness and are knowledgeable of heat illness symptoms, methods to prevent heat illness, and procedures to follow if heat illness symptoms occur.

Scope - This document applies to all (INSERT COMPANY NAME) employees that may be at risk of heat illness and applies to all indoor and outdoor places of employment, where environmental risk factors for heat illness are present.

2.0 Definitions

Acclimatization - The process or result of being accustomed to a new climate or to new conditions. The temporary adaptation of the body to work in the heat occurs gradually when a person is exposed to it.

At Ground - Lowest work level which may be ground or rooftop level.

Buddy System - a cooperative arrangement whereby individuals are paired or teamed up and assume responsibility for one another’s instruction, productivity, welfare, or safety.

Heat Illness - A serious medical condition resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke.

Environmental risk factors for heat illness - Working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, radiant heat from the sun and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personal protective equipment worn by employees.

Lone Worker - A worker who works alone in circumstances where assistance would not be readily available.

Newly Hired - An employee that has not been previously employed by the employer, or who was previously employed by the employer but has been separated from the employer for at least 60 consecutive days.

Personal risk factors for heat illness - Factors such as an individual's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affects water retention or other physiological responses to heat.

Preventative recovery period - A period of time used to recover from the heat in order to prevent further heat illness.

Shade - Blockage of direct sunlight. Canopies, umbrellas and other temporary structures or devices may be used to provide shade. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, a vehicle sitting in the sun does not provide acceptable shade to a person inside it, unless the vehicle is running with working air conditioning.

3.0 Responsibilities

Employer

- Establish and update, when necessary, the written Heat Illness Prevention Policy.
- Provide training to employees who fall within the scope of this policy.
- Establish procedures to determine when, where, and how shade is provided.
- Provide workers with adequate cool drinking water.
- Modify work schedules and/or activities for newly hired workers and unacclimated existing workers who are new to working in warm environments.
- Encourage and allow rest breaks in a cooler environment. The duration of the rest breaks should be adequate to reduce heat illness.
- Consider scheduling work at a cooler time of day, such as early morning or late afternoon.
- Where possible, rotate job functions among workers to help minimize exertion and heat exposure.
- Establish an emergency plan that specifies what to do if a worker has symptoms of

heat-related illness and ensure that medical services are provided, if needed.

- Implement a buddy system or lone worker system for workers in heat stress environments.

Supervisor (Includes Foreman/Crew Leader)

- Complete a JHA and identify all tasks and employees required to work where potential heat illness could occur and include mitigation procedures.
- Ensure all affected employees receive proper training on heat illness prevention and comply with all appropriate procedures.
- Ensure that adequate water and shade are available at the job site when the environmental risk factors for heat illness are present.
- Encourage employees to drink water frequently.
- Follow JHA procedures to request emergency medical services in the event medical assistance is required.
- Establish buddy system or lone worker system when assigning work tasks to crew member.

Employees

Are responsible for the following:

- Awareness and compliance with all appropriate heat illness prevention procedures while performing assigned duties.
- Drinking adequate amounts of hydrating fluids when the environmental risk factors for heat illness are present.
- Utilize access to a shaded area to recover from heat related symptoms and inform their supervisor if shade and/or water is inadequate.
- Report symptoms of heat related illness (personal or coworker – buddy system) promptly to their supervisor.
- Follow JHA procedures to request emergency medical services in the event medical assistance is required.
- Avoid drinking hot beverages during lunch and afternoon breaks.
- Notify employer of medications or medical conditions that may impact heat illness
- Summon EMS when necessary.

4.0 Procedure/Process Policy Components

The following elements of this policy for heat illness prevention provide specific information

for employees and supervisors complying with the policy:

- Provision of Water – Access to water is required regardless of temperature. Supervisors are responsible for ensuring that clean, fresh, and cool potable water is readily available to employees.
- Where unlimited drinking water is not immediately available from a plumbed system, supervisors must provide an adequate amount of water for every employee to be able to drink throughout the entire shift (approx. 2 gallons per employee for an 8-hour shift or a quantity of (16) - 16 oz bottles of water). Smaller quantities of water may be provided at the beginning of the shift if there are effective procedures for replenishing the water supply during the shift as needed.
- Employers, supervisors, and all fellow crew members should encourage all employees to drink frequently when working in hot environments. Employees must understand that thirst is not an effective indicator of a person's need for water and dehydration can happen in hot and cold environments.

Employers shall take one or more of the following steps to ensure employees have access to drinking water:

- Provide access to drinking fountains.
- Supply water cooler/dispenser and single service cups.
- Supply sealed water containers.

Drinking water and water dispensers shall meet the following requirements:

- All sources of drinking water shall be maintained in a clean and sanitary condition.
- Drinking water, when working at ground or rooftop level, must always be kept cool enough to drink safely, when temperatures exceed 89° F.
- Potable drinking water dispensers used to provide water to more than one person shall be equipped with a spigot or faucet.
- Any container used to store or dispense drinking water shall be clearly marked as to the nature of its contents and shall not be used for any other purpose.
- Dipping or pouring drinking water from containers, such as barrels, pails or tanks, is prohibited.
- The use of shared cups, glasses or other vessels for drinking purposes is prohibited.
- Non-potable water shall not be used for drinking.

Access to Shade

Employees working outdoors at ground level should have access to a shaded area for cool down periods to prevent heat related illness when the temperature is 89 degrees or higher. (Note: Individual Sate Requirements must be followed if more stringent than this program.)

Supervisors shall encourage employees to take breaks in the nearest shaded area, when necessary, as close as practicable. Canopies, umbrellas, or other temporary structures may be used to provide shade, provided they block direct sunlight. Trees and dense vegetation can provide shade if the canopy is sufficiently dense to provide substantially complete blockage of direct sunlight. The interior of a building or vehicle may be used to provide shade if the building or vehicle is air-conditioned, and the air conditioner is operating.

Acclimatization

Supervisors are required to allow employees sufficient time to adapt when temperatures rise suddenly and employees' risks for heat illness increase. Acclimatization may also be required for new employees, employees working at temperatures to which they haven't been exposed for several weeks or longer, or employees assigned to new jobs in hot environments.

About four to fourteen days of daily heat exposure is needed for sufficient time to acclimate to the environment. Gradually increase the length of work each day until an appropriate schedule adapted to the required activity level for the work environment is achieved. This will allow the employee to acclimate to conditions of heat while reducing the risk of heat illness.

Preventative Recovery Periods

Access to shade for employees who believe they need a preventive recovery period from the effects of heat and for any who exhibit indications of heat illness shall be provided. The preventive recovery period is not a substitute for medical treatment when required.

Emergency Procedures

If an employee has any symptoms of heat illness, first-aid procedures should be initiated without delay. Common early signs and symptoms of heat illness include headache, muscle cramps, and unusual fatigue. However, progression to more serious illness can be rapid, and can include loss of consciousness, seizures, mental confusion, unusual behavior, nausea or vomiting, hot dry skin, or unusually profuse sweating.

Any employee exhibiting any of the above-mentioned symptoms requires immediate attention. Even the initial symptoms may indicate serious heat illness. Employees with symptoms of possible serious heat illness should not be left unattended or sent home without supervisor authorization.

If any employee exhibits signs or symptoms of heat stroke or more serious illness, emergency medical services shall be contacted. Supervisors shall follow company procedures.

5.0 Training

Training shall be provided by the employer for all potentially impacted employees, and their supervisors, working where environmental risk factors for heat illness are present. Training information shall include, but not be limited to:

- Environmental and personal risk factors, including medications, for heat illness.
- Procedures for identifying, evaluating, and controlling exposure to environmental

risk factors for heat illness.

- The importance of frequent consumption of hydrating fluids when environmental risk factors for heat illness are present.
- The differences of heating and cooling affects when working at ground level and at elevation.
- The importance of acclimatization.
- Different types of heat illness and the common signs and symptoms of heat illness.
- The importance of immediately reporting symptoms or signs of heat illness, in themselves or in coworkers, to their supervisor, and discuss the importance and implementation of the buddy system or lone worker system.
- Following your company's JHA and emergency procedures.

Supervisors shall receive training on the following topics prior to being assigned to supervise outdoor employees.

- The training information required of the employees, detailed above.
- Procedures the supervisors are to follow to implement this policy.
- Procedures the supervisor shall follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.

Retraining will be required under any of the following conditions:

- Changes in the workplace render previous training obsolete.
- Inadequacies in an employee's knowledge of heat illness prevention indicate that the employee has not retained the required training.

6.0 Record Keeping

Training records shall be maintained by the employer for a minimum of 3 years or follow the employer's record retention policy.

Appendix B

Temperature Survey Report

Occupational Safety and Health Administration (OSHA)

Proposed Rules for Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings Notice of Proposed Rulemaking (NPRM)

Appendix Report on behalf of NATE: The Communications Infrastructure Contractors Association

Executive Summary

NATE: The Communications Infrastructure Contractors Association (NATE) hereby is providing Public Comments in accordance with the Proposed Rules for Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings. As a component of this process, NextEdge Networks Holding LLC, provided Sper Scientific SPER 800037 data loggers to collect atmospheric data (i.e., WBGT Temperature, Ambient/Relative Humidity, etc.) at ground and elevated work locations from two (2) telecommunication Project Sites located in South Texas, USA. Data was collected at 2-second intervals, analyzed, evaluated, and returned results that supported the empirical idea that, with elevation, overall temperatures decreased between approximately 7°F to 13°F (11.60% to 18.85%), respectively.

A Method of Procedure was developed to provide consistency across the sampled work locations and for future anticipated monitoring and analyses efforts. With these data collections, NATE does understand and value the importance and significance of preventing heat-related incidents within the overall indoor/outdoor worker protection program promulgated by OSHA. Likewise, NATE is in alignment with previous comments from the Small Entity Representatives (SERs) in that the true nature and potential impacts to the human body from descending, then re-ascending, to/from these work elevations to participate in a 15-minute break is problematic at best.

Typically, the time involved in descending and/or ascending a mid-sized telecommunications tower structure (i.e., 200 feet) may vary from between 15 to 25 minutes, respectively. It is not the travel time between these elevations that NATE has concerns; however, it is the safety of our Team Members relative to the unknown additional exertion placed on them for compliance with the proposed standard as well as the known Safety Hierarchy of Elimination – remove the additional risk of supplemental tower climbing.

NATE recommends more studies be performed at ground and elevation-based scenarios during warmer months. These additional studies will include a more representative geographical distribution, allow for greater weather variability to include heat indexing, as well as increased overall scientific data collection specific to the telecommunications Industry. Further, NATE recommends the Telecommunications Tower Services Industry be exempt from the 90°F temperature threshold until such time that a feasible threshold can be determined.

Purpose

This document provides Public Comments in accordance with the Proposed Rule as stated in the Federal Register, Volume 89, Number 169, dated August 30, 2024. The Department of Labor (DOL) through the Occupational Safety and Health Administration (OSHA) has developed Proposed Rules for Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings. As component of this process, the action of requesting public comments is included within the Notice of proposed rulemaking (NPRM).

General Information

This report and field data collection efforts were performed by NextEdge Networks Holding LLC, Environmental, Health and Safety (EH&S) Department on behalf of The Communications Infrastructure Contractors Association (NATE) OSHA Relations Committee for an overall evaluation of telecommunications-related industry baseline information.

The instruments utilized for the data collection efforts were procured from Sper Scientific; models utilized were the SPER 800037 and the associated software for data capturing. Two (2) SPER 800037 data loggers were used at each telecommunication tower structure facility; one (1) ground-based, one (1) at the elevated work location. Appendix 1 presents specifications and operational characteristics for the SPER 800037 data-logger system.

These data were collected at two second intervals and recorded five different temperature characteristics and relative humidity. The five temperatures are described as:

1. WBGT Temperature - The wet-bulb globe temperature (WBGT) is a measurement of how hot the environment is and how it affects humans. It is used to estimate heat stress level in direct sunlight and considers four major environmental factors: air temperature, humidity, radiant heat, and air movement.
2. TA Temperature - ambient temperature of the air surrounding the device when in use (i.e., during data collection).

3. RH – refers to Relative Humidity which is a measurement of the amount of water vapor present in air expressed as a percentage of the amount needed for saturation at the same temperature.
4. DP Temperature - refers to the "dew point temperature." DP is a function of air pressure and water content of the local atmosphere. At the DP, air becomes saturated with water vapor, meaning it reaches 100% relative humidity and condensation begins to form; the temperature at which the air needs to be cooled to for dew to form.
5. TG Temperature - is Glass Transition Temperature (Tg). Tg is the temperature at which an amorphous polymer changes from a hard/glassy state to a soft/leathery state, or vice versa. Tg is directly related to a material's strength and capabilities in any given end-use application. This is not applicable for this study.
6. WET Temperature - is the lowest temperature to which air can be cooled by the evaporation of water into the air at a constant pressure. This is not applicable for this study.

Site Locations

1. 5160 Helbig Rd., Beaumont, TX 77708
2. 382 County Rd 603, Dayton, TX 77535

Survey Team Members

- David Haley – NextEdge Networks
- Jeff Hamm – NextEdge Networks
- Alan Heter – Nokia of America

Introduction

This study's intent is to provide supplemental observed data to support the NATE response to the proposed OSHA Heat Illness Standard in accordance with the NPRM. The purpose is to present data supporting empirical knowledge that, with the advancement of tower climber worker elevation, the corresponding and relevant constraints (i.e., WBGT, TA, RH) decrease with the worker’s elevation.

Due to the time of the year this study was performed (i.e., November 2024) as well as relevant work scopes and tower crew availabilities, the geographical regions of South Texas and Florida were selected as appropriate work locations for the warmer temperatures.

Method of Procedure (MOP)

The same MOP was followed for all site locations where data sets were collected to maximize the consistency of data collection as well as to reduce potential inconsistencies regarding the same. Fundamental MOP steps included the following:

1) Arrive to site location, complete the Daily Job Safety Analysis (JSA) with involved Crew Members,

2) Inventory of all relevant components to ensure all necessary items are available for both the grade based as well as elevated data logging units,
3) Engaged the power to the SPER 800037 units, ensure all operational components were functioning correctly, data collection was initiated at 2-second intervals,
4) Establish and set-up the grade SPER 800037 Base Station data collection unit,
5) Tower climbers would then climb to the applicable work elevation,
6) The elevated SPER 800037 would then be placed within a "Nose Bag" and hoisted to the work elevation,
7) The elevated SPER 800037 unit would be secured to the tower structure, or mount appurtenance, in proximity to the working crew members (i.e., 5 to 10 feet),
8) The unit is then secured to a mount appurtenance in free air,
9) The unit is turned on, record on and logging on. Logging is recorded to an SD card.
10) Once the data logging was completed, the following were completed:
    a. Units secured,
    b. SD card data downloaded as a text file (.txt),
    c. Data transferred to an Excel file for review and evaluation.

Worksite Descriptions

Location No.	Latitude	Longitude	Ground Elev.	Upper Elev.	Elevation Difference	Date	Time of Day (24 Hours)	Duration (Hours)
1	30° 7' 37.992"	-94° 8' 19.607"	23	133	110'	11/14/24	13:39	71 Min
2	29° 59'53.98"	-94° 57' 27.07"	65	353	288'	11/19/24	13:03	78 Min

Notes: Elevations are in feet Above Mean Sea Level (ASML)

Hazard Identification

NATE does understand and value the importance and significance of preventing heat-related incidents within the overall indoor/outdoor worker protection program promulgated by OSHA. With this understanding, NATE specifically questions the applicability of descending from, then re-climbing back to the original elevated work location(s) from the telecommunication perspective. Our affiliated Team Members often work at elevations from several tens-of-feet to several hundreds-of-feet above the ground surface: some even at +/- 1,00 feet. Tower Climbers expend an amount of physical energy/exertion to ascend/descend the various tower structures across the country. NATE is in alignment with previous comments from the Small Entity Representatives (SERs) in that the true nature and potential impacts to the human body from descending, then re-ascending, to/from these work elevations to participate in a 15-minute break is problematic at best. Additionally, this process is counterintuitive to the standard practice of the primary and known Safety Hierarchy of Elimination – Remove the Hazard. By not descending, enacting a break on the ground, then re-ascending, our Team Members remove, or eliminate, the known hazard of tower climbing, fall protection/restraint/transitioning and others.

Additionally, NATE concurs with the Small Business Advocacy Review (SBAR) Panel discussion points including allowing employers flexibility as to where and how workers take their breaks and be situationally dependent. NATE does appreciate the OSHA response in that the summary and explanation for rest breaks under the high heat triggers clarifies that no work activities would be allowed during rest breaks.

OSHA does provide an estimate of travel times to/from the average work area to a rest break area (TABLE VIII.C.30). NATE does have reservations regarding the outdoor travel time estimate of four (4) minutes. As stipulated above, our Team Members work at varied elevations throughout our industry and any given day. Typically, the time involved to descend and/or ascend a mid-sized (i.e., 200 feet) telecommunications tower structure may vary from between 15 to 25 minutes, respectively. It is not the travel time between these elevations that NATE has concerns; however, it is the safety of our Team Members relative to the unknown additional exertion placed on them for compliance with the proposed standard as well as the known Safety Hierarchy of Elimination – remove the additional risk of supplemental tower climbing.

To implement adequate Heat Illness Prevention Plans, it is important to note that NATE already provides Members with proactive practices and various controls. These initiatives include live webinars, participation and Member SER feedback, Bulletins as well as recommendations for varied work schedules (i.e., early morning starts, afternoon hiatus, evening hours) and mechanical advantages (i.e., MEWP, crane, etc.) with sufficient controls. Additionally, NATE believes the recognized and known OSHA/NIOSH Heat Index Mobile Application is readily used by our Team Members to assist with the identification as well as implementation of heat control measures."

Exposure Assessment

As stated earlier, Assessments were performed using two (2) SPER 800037 data loggers at each telecommunication tower structure facility; one (1) ground-based, one (1) at the elevated work location. Overall, two (2) telecommunication Projects were evaluated as presented within the MOP Section of this document. It is anticipated that NATE Members will continue data logging and interpretation efforts when the warmer weather returns across various geographical areas.

Findings and Discussion

Site #1

Site located in Beaumont, TX; data-logging information was collected between 13:39-hours and 14:49-hours on November 11, 2024. The average of the WBGT temperature samples reflect a 7.19°F decrease (-11.60%) from ground to the 110-ft elevation on the tower structure, with a minor increase of Relative Humidity (RH) of 9.8%. The ambient temperature (TA) showed an 11.07°F decrease (15.38%) at the 110-ft elevation versus the ground elevation.

Site #2

Site located in Dayton, TX; data-logging information was collected between 13:03-hours and 14:21-hours on November 19, 2024. The average of the WBGT temperature samples reflect a 11.25°F decrease (-15.38%) from ground level to the 288-ft elevation on the tower structure, with a small increase in Relative Humidity (RH) of 1.0%. The ambient temperature (TA) showed a 13.57°F decrease (-18.85%) at the 110-ft elevation versus the ground elevation.

The below Table presents a summary these data points:

Site #	# of Ground Samples	# of Elevated Samples	Difference in Elevation (ft)	Avg Ground WBGT Temp	Avg Elevated WBGT Temp	WBGT Temp Change	Avg Ground RH	Avg Elevated RH	RH Change	Avg Ground TA Temp	Avg Elevated TA Temp	TA Temp Change
1	2065	1881	110	69.18	61.99	-7.19	28.62	36.42	+7.8	83.07	72.00	-11.07
2	2330	1881	288	73.23	61.98	-11.25	35.42	36.42	+1.0	85.57	72.00	-13.57

WBGT: Wet-bulb Globe Temperature

RH: Relative Humidity

TA: Ambient Temperature

Overall, the data presented shows that, between the ground and elevated measurements, both the WBGT and TA values decreased by double digits in 3 of 4 examples. The single digit WBGT value of -7.19 at Site #2 may be attributable to a variety of factors including sun/overcast, wind, and/or other weather conditions; however, did in fact register lower than the ground measurement. The Relative Humidity (RH) did register slight increases at both locations between ground and elevated measurements.

Recommendations

Due to varying factors, these data-logging parameters were collected in the fourth quarter of the year, when temperatures were cooling off. Accordingly, NATE were only able to achieve a limited amount of real-time data sources for this study. For this reason, it is recommended that more studies be performed at ground and elevation-based scenarios during warmer months. These additional studies will include a more representative geographical distribution, allow for greater weather viability to include heat indexing, as well as increased overall scientific data collection specific to the telecommunications Industry to which NATE provides a valuable resource and direction.

It is the recommendation of NATE that the Telecommunications Tower Services Industry be exempt from the 90°F temperature threshold until such time that a feasible threshold can be determined.

Conclusion

It has been determined, with near continuous data-logging and analytical analyses, that Wet-bulb Globe (WBGT) as well as Ambient Temperature (TA) values decrease when respective work elevation values exceed the surrounding environs (i.e., above the tree line, buildings, wind breaks, etc.). This data, however limited, supports the empirical data from NATE Team Members that, “it is cooler up on the tower.” It is noted that additional data from various work elevations, geographical locations as well as ambient climatological environments are necessary to form a robust consensus. Likewise, an evaluation of and including the physical exertion required to ascend/descend the various tower structures may be necessary. Given these data points, NATE urges OSHA to pause the 90°F threshold pending additional “hard data” collection, analyses, and evaluation.