SECRETARY OF LABOR, Complainant,	:	
v.	:	OSHRC Docket No. 96-770
UNION TANK CAR COMPANY, Respondent,	:	
and	:	
UNITED STEELWORKERS OF AMERICA, LOCAL 8923, Authorized Employee Representative.	:	

Appearances:

Madeleine T. Le, Esquire
Janice H. Mountford, Esquire
Office of the Solicitor
U. S. Department of Labor
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For Complainant

Robert H. Brown, Esquire
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For Respondent

David Adcox, President
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Romayor, Texas
For Authorized Employee Representative

Before: Administrative Law Judge Nancy J. Spies

DECISION AND ORDER

Union Tank Car Company (UTC) manufactures and repairs railroad tank cars. UTC contests a single-item serious citation issued to it on April 30, 1996, under the Occupational Safety and Health Act of 1970 (Act). Responding to a formal complaint by UTC's employee representative, the United Steelworkers of America, Local 8923 (USWA), in Cleveland, Texas, the Occupational Safety & Health Administration (OSHA) reviewed UTC's method for retrieving potential victims from tank cars. After some indecision, OSHA cited UTC's use of "wristlets" (wrist harnesses) as a violation of § 1910.146(k)(3)(i) (Tr. 137, 143). UTC asserts that it meets

the exception in the standard for use of wristlets and, further, that the standard is pre-empted. For the reasons stated below, neither argument is accepted.

At the beginning of the hearing, David Adcox, representing the USWA, sought and was granted party status. Pursuant to Commission Rule 20(a), good cause was shown for the lateness of the election. Adcox timely filed for party status for an unrelated case (Citation No. 1) and wrongly, though not unreasonably, concluded that this constituted an election for Citation No. 2 as well.[1]

Background

At its Cleveland, Texas, plant, UTC operated one of its 34 repair shops for its fleet of 60,000 railroad tank cars. It is expected that about 13,500 of these cars will need to be repaired each year. During the past year, about 1,500 cars were repaired at the Cleveland, Texas, plant. Repairs to the interior of the tank cars in Cleveland required employees to enter the cars 70 to 100 times per month (Tr. 257-258, 367).

The cylinder-shaped tank cars, which employees entered in Cleveland, were between 15 to 70 feet long and between 12 to 14 feet wide (Tr. 291-293, 414). Each tank car had one manway opening at the approximate center of the car top. On average (Tr. 367):

> 2 percent of the tank cars had openings of 16 inches or less;
> 45 percent of the tank cars had openings of 17 to 18 inches; and
> 53 percent had openings between 19 to 20 inches.

During the past 20 years, UTC's employees wore wristlets in 99 percent of the tank car entries. UTC would allow body harnesses in lieu of wristlets only if employees requested to use them in tank cars with manway openings larger than 30 inches (Tr. 370, 425).

Discussion

UTC argues that it may choose to use wristlets. The Secretary and the employee representative contend that, in UTC's circumstances, UTC must utilize body harnesses.

> In order to establish a violation of an occupational safety or health standard, the Secretary has the burden of proving: (a) the

[1] The Secretary issued the instant citation as Citation No. 2. The case resulting from Citation No. 1 (issued on March 22, 1996) was not related to Citation No. 2 . The Citation No. 1 case was assigned to Judge James H. Barkley, who granted UTC's dispositive motion on December 6, 1996.

> applicability of the cited standard, (b) the employer's noncompliance with the standard's terms, (c) employee access to the violative conditions, and (d) the employer's actual or constructive knowledge of the violation (*i.e.*, the employer either knew or, with the exercise of reasonable diligence could have known, of the violative conditions).

Atlantic Battery Co., 16 BNA OSHC 2131, 2138 (No. 90-1747, 1994).

Tank cars at the Cleveland plant are admittedly permit-required confined spaces. UTC recognizes that employees working in tank cars may be exposed to fire, electrocution, low-oxygen levels, falls, or other debilitating conditions requiring rescue (Tr. 264). Paragraph (k) of § 1910.146 governs rescues and emergency services in the tank cars (emphasis added):

Section 1910.146(k)(3)(i) provides:

> (3) To facilitate *non-entry* rescue, retrieval systems or methods shall be used whenever an authorized entrant enters a permit space, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant. Retrieval systems shall meet the following requirements.
>
> > (i) Each authorized entrant shall use a chest or full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level, or above the entrant's head. *Wristlets may be used in lieu of the chest or full body harness if the employer can demonstrate that the use of a chest or full body harness is infeasible or creates a greater hazard and that the use of wristlets is the safest and most effective alternative.*[2]

Wrist and Body Harnesses

Wristlets or wrist harnesses are bracelet-type devices secured to each of the employee's wrists. Each wristlet is attached to a rope four feet long, with the two ropes connected by a ring. In turn, a lifeline attaches to the ring and is tied off at the other end outside the tank car (Exh. R-1A).

[2] The standard permits use of chest or full body harnesses. No one suggests that use of chest harnesses was an alternative that would be either recommended or accepted (Tr. 247). Chest harnesses are not further discussed.

Body harnesses have five straps. One strap fits over each shoulder; one straps fits around the waist; and one strap fits around each leg. Body harnesses attach to a lifeline at the mid-back or higher. The body harness's lifeline is also tied off outside the tank car. With the optional attachment of a "spreader bar" (a short round bar which separates the shoulder straps) an employee in a body harness can be retrieved from a point above his or her head (Exhs. C-3A,-4A).

Exception for Wristlets

UTC bears the burden to establish that it qualified for the exception stated in § 1926.146(k)(3)(i). *See Peavey Grain Co.,* 15 BNA OSHC 1354, 1359 (Docket No. 89-3046, 1991). Initially, UTC suggests that where there is no opposing case precedent, the employer's assessment of the effectiveness of the means of retrieval should be accepted as compliance (Respd. brief p. 14). Whether the employer considered wristlets more appropriate or whether the employee representative, as in this case, reached the opposite conclusion, is not determinative.

The existence of a standard presumes the existence of a hazard. *Wright & Lopez*, 10 BNA OSHC 1108 (No. 76-256, 1981). Permission to use wristlets is granted only when the use of full body harnesses is (a) infeasible **or** (b) creates a greater hazard **and** wristlets are the safest and most effective alternative.

UTC does not contend that use of full body harnesses is infeasible. Rather, UTC argues that the second alternative applies, *i.e.*, that body harnesses presented a greater hazard and wristlets were the safest and most effective alternative to them. UTC argues that its proof as to both elements "merge." UTC seeks to prove the exception by detailing its experience with wristlets and by explaining its evaluation of the risks of using body harnesses. UTC contends that, (1) body harnesses make for slower retrieval; and, (2) they present a greater snag potential while retrieving victims.

Rescues

A victim is "rescued" in one of three ways: 1) by self-rescue; 2) by "retrieval" (non-entry rescue); or 3) by "entry-rescue" (another individual enters the confined space to assist in extracting the victim) (Tr. 216). There was expert testimony that the standard places too much

emphasis on non-entry retrieval, since entry-rescue is often safer for the victim while also safeguarding the rescuer (Tr. 206). Nevertheless, the standard requires that retrieval devices be evaluated as they aid in *non-entry retrieval*, which is the sole focus of this case.

UTC's Experience With Wristlets

UTC has had little significant experience with *non-entry* retrieval using wristlets and almost none using body harnesses. Although over 10 years ago UTC used wristlets to rescue two conscious employees from tank cars, this shows nothing about the efficacy of wristlets, other than the fact that the employees were retrieved. (The only actual rescue in Cleveland was accomplished by a rescuer entering the tank car, tying a rope around a victim's ankles, and pulling him up to safety (Tr. 48-49, 263).)

UTC's rescue drills were usually *entry* rescue rather than non-entry retrieval. UTC designated employee rescue teams for each department. The trained employees conducted on average one rescue drill a year. During rescue drills at Cleveland, a team member entered the tank, dragged the "victim" to the plumb point below the manway opening, and allowed the "victim" to climb up the ladder on his or her own. The "victims" did not permit themselves to be raised up out of the tank car by their wristlets (Tr. 94-95, 259-260). As Hall explained (Tr. 46-47):

> Q. Now, when you say, "We brought him out," do you bring him out using the wristlets?
>
> A. In most cases, no. Well, absolutely no cases, no, because we haven't had anybody allow us to pull them out with the wrist harnesses. Mostly everybody climbs out.
>
> . . .
>
> Q. What did you mean by no one will let you pull them out?
>
> A. The big problem we find with the wristlets is the fact that it puts a severe strain on people's shoulders when we try to pick them up. We have tried to lift people with these wristlets. They will tell us to put them down. So we set them back down and they climb out.

Neither UTC's experiments with wristlets in 1979 and 1980, nor the rescue drills which Alvin Williams, UTC's safety consultant, and William Finkler, UTC's corporate Safety Director, conducted separately at other plants shortly before the hearing provided information useful for comparisons. The only time Finkler experimented with retrieval of an employee wearing a body

harness, the employee was successfully retrieved under the rescue conditions which would exist in Cleveland (407-410).

Employees' Experience With Body Harnesses

In May 1994, the Cleveland Fire Department sent UTC employee Lloyd Hall to training on confined space rescue. Hall is a member of the Cleveland Volunteer Fire Department and is also a team captain of UTC's rescue squad. During the training, Hall learned of a rescue technique for positioning a victim's body, which was new to him (Tr. 44, 50-52). The technique Hall learned was the "swimmer's position," *i.e.,* one of the victim's arms is stretched above the head while the other arm remains at the side (Tr. 59, 117). The swimmer's position is an accepted procedure used to narrow the victim's profile at the shoulders and chest thus providing a smaller circumference to be pulled through an opening. The technique was used with victims wearing body harnesses.

After his training, Hall determined to try the swimmer's position with a body harness during the next rescue drill. Hall is a large man with 20-inch wide shoulders. That month, Hall placed himself as the "victim" in a tank car with an 18 - 20 inch manway. This was an entry-rescue drill, but Hall, unlike the "victims" in the wristlet drills, permitted himself to be raised through the manway by the lines attached to his body harness (Tr. 58). Hall's arm was placed in the swimmer's position, and he was extricated through the tank car without difficulty (Tr. 50-51). Hall, and later the USWA, requested to use full body harnesses, rather than wristlets, for most tank car entries. UTC's safety director William Finkler reviewed the request and denied it.

In May, 1995, several employees wished to assess body harnesses in another rescue drill. Employees C.N. Young and Hall were "victims." Young wore a body harness into a tank car with a 17-inch manway opening. Young is a large individual with a shoulder width of 21 inches. In the several separate "rescues" (Young simulated being conscious and unconscious), Young and Hall were fully extricated from tank cars using the swimmer's position (Tr. 50-51). Finally, on March 20, 1996, the employees again successfully extricated two employees from 20-inch manway tank cars (Tr. 24).

No Greater Hazard; Not Most Effective Alternative

The Secretary presented the expert testimony of Michael Roop. Roop was qualified and knowledgeable, having considerable national experience in the field of confined space and

industrial rescue (Tr. 167-68). Roop often participated in actual rescues or rescue drills from tank cars and other confined spaces, including from manways as small as 16 to 17 inches (Tr. 199). Roop's company is the largest trainer of rescuers in the country. Roop's experience with rescue techniques was directly relevant and broad-based (Tr. 172-175). His opinions were consistent and credible.

On the other hand, UTC's safety consultant and expert witness, Alvin Williams, although perhaps knowledgeable about general safety issues in the industry, lacked expertise in rescue (Tr. 300). Williams had never observed an employee being pulled from a tank car while wearing a body harness (Tr. 335). In fact, he had only seen one employee pulled from a tank car with wristlets and that was during a demonstration before the hearing. Williams had never seen the swimmer's position, had never participated in an actual rescue, and had not seen a mechanical device used in retrieval (Tr. 338, 343, 357, 407). Williams considered that a reduction in the time needed for retrieval was "the only reason" wristlets were preferred over body harnesses (Exh. U-1). He was not aware of tests which compared the two types of retrieval equipment (Tr. 345).

In the early 1980s when the rescue industry attempted to develop acceptable rescue techniques, Roop did "quite a bit of practicing and drilling with wristlets." Roop found that "quite frankly, we were hurting people . . . . . We decided to stay away from wristlets for other than positioning devices unless . . . it's a last-ditch effort in our opinion" (Tr. 185). From Roop's experience, rescue professionals advocate use of full-body harnesses over wristlets (Tr. 201). Roop noted the "remarkable" innovations and developments within the field within the last 15 years (Tr. 170).

UTC urges that the fact the body elongates when pulled up by the wristlets is of major importance to a successful rescue. When the hands of a victim are pulled overhead, as when wristlets are pulled up, the shoulders fold toward each other and the body elongates and is narrowed. The parties referred to this "hands stretched overhead" posture as a "prayer position." UTC contends that stretching narrows the profile and allows the victim to be more easily, and thus more quickly, pulled though the tank car manways.

Whether the victim is being pulled by wristlets into the prayer position or is being pulled up in a body harness (even without being in the swimmer's position), the body elongates to some degree. The prayer position and swimmer's position narrow a victim's profile about the same,

with the swimmer's position narrowing it slightly more. When rescuers are properly trained to assess emergency conditions, they anticipate any manipulations that may be necessary to bring victims through the manways. These include reaching down to support an unconscious victim's head or pulling up an arm into the swimmer's position (Tr. 206, 213-214, 223).

Even accepting that there may be an estimated 3 to 5 second differential between using the swimmer's position to retrieve a victim in a body harness and pulling him or her up using wristlets, wristlets are not necessarily safer. The potential harm to a victim who uses wristlets outweighs the small difference in time. Roop did not consider the small time difference to be significant when viewed in terms of an employee retrieval (Tr. 210-211, 461-463).

It is important to note that for many of UTC's manways it would not be necessary to use the swimmer's position to bring up a victim wearing a body harness. In Roop's experience, it is possible and usual to retrieve individuals from manways ranging from 17 to 19 inches without putting the victim into the swimmer's position (Tr. 464). For particularly large victims, or when victims wear bulky protective clothing, or when rescue is from the smaller manways, the swimmer's position may be necessary. Both Williams and Roop might put a victim into the swimmer's position, regardless of whether the victim is wearing wristlets or body harnesses (Tr. 206, 339). UTC has not shown that using wristlets provides an advantage in either time or ease of retrieval.

Not much need be said in rejecting the other alleged benefits for wristlets. It is recognized that depending upon the type of the tank car, the interior may have one or more of the following fixtures: fixed ladders, siphon and heater pipes, valves, gauge bars, brackets, and internal heater coils (Exh. R-19; Tr. 96). In an emergency, employees must be extracted so that clothing, limbs, or the parts of a wrist or body harness do not catch on these bars, gages, ladders or valves. The possibility of catching clothing or limbs on the various obstructions within the tank is an ongoing concern. The argument is rejected that because a body harness has more straps, it will present a more likely snag or entanglement hazard. When body harnesses are properly worn close to the employee's clothing, there is no appreciable risk that it will present a greater snag potential than would the victims' other clothing. Both retrieval devices present some entanglement concerns. Rescue employees are trained to react against that eventuality (Tr. 58, 95, 102, 190, 201, 349).

UTC also argues that if an unconscious victim is wearing wristlets the position of the arms will cradle the person's head through the manway (Tr. 347). Roop's testimony was convincing that the head of an unconscious victim falls all the way forward to the chest, or all the way backward toward the back (Tr. 239). The prayer position has no cradling effect for an unconscious victim.

Even if it is argued that the relative effectiveness of body harnesses must be assessed without weighing possible manipulation of the victim's body, three things are noted: (1) Many tank car retrievals can be accomplished without use of the swimmer's position; (2) manipulation may also be necessary with wristlets; and (3) use of body harnesses with manipulation is a safer and more effective technique than use of wristlets.

In stating a preference for body harnesses, the standard may have adopted the rescuer's motto of "do no more harm." Using wristlets for retrieval can injure a victim or aggravate an injury (Tr. 80, 201). At a minimum, it is concluded that use of body harnesses is as feasible and works as well as wristlets to retrieve victims from UTC's confined spaces. The standard requires use of body harnesses in these circumstances.

Exposure

UTC contends that the citation should be vacated because some of the entry employees were welders. UTC suggests that § 1910.252(b)(4)(iv) preempts application of the standard to welders. It further contends that, unless the Secretary specifically delineates which employees were not welders, the standard can not be found to apply to any entry employee. The record is clear that in addition to welders, employees who are car repairmen, tank car testers and inspectors, rescue team members, cleaning rack personnel, liners, and quality control personnel regularly entered the tank cars wearing wristlets (Tr. 16, 19, 44, 56, 111, 437). In these circumstances, it is not necessary to determine whether § 1910.252(b)(4)(iv) preempts § 1926.146(k) (3)(iv) for welders.

Knowledge

UTC decided to use wristlets in lieu of body harnesses. Proof of knowledge requires only that an employer knows of the violative conditions, not that it accepts that a condition is

hazardous or that a particular legal interpretation applies. *Phoenix Roofing, Inc.*, 17 OSHC BNA 1076, 1079 (No. 90-2148, 1995). The Secretary has established knowledge.

Serious

UTC maintains that if a violation occurred, it cannot be classified as serious. UTC is correct that even if employees should have worn body harnesses, they would have been rescued from life-threatening hazards by their wristlets. Since employees used wristlets, it is improbable that death would result from the violation. The testimony shows that arm dislocations and spinal injuries are an anticipated result when employees are pulled up by the wrists, even for the relatively short distances involved in this case (Tr. 186, 212, 223). The violation is properly classified as serious.

Penalty

The Commission must give "due consideration" to the size of the employer's business, the gravity of the violation, the employer's good faith, and its history of past violations in determining an appropriate penalty. *J.A. Jones Constr. Co.*, 15 BNA OSHC 2201, 2213-14 (No. 87-2059, 1993). UTC employs approximately 2,600 employees, 130 of whom work in Cleveland, Texas. It is a large corporation (Tr. 359-360, 367). UTC has an active and successful safety program and an enforced and effective confined space program. The gravity of the violation is lessened because employees wore wristlets to protect them from life-threatening hazards. A penalty of $1,500 is assessed.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

The foregoing decision constitutes the findings of fact and conclusions of law in accordance with Rule 52(a), Fed.R.Civ.P.

ORDER

Based on the foregoing decision, it is ORDERED that Item 1, Citation No. 2, is affirmed. A penalty of $ 1,500 is assessed.

NANCY J. SPIES
Judge

Date: February 23, 1998