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SECRETARY OF LABOR
Complainant,
v.
BIONETICS CORPORATION
Respondent.

OSHRC DOCKET
NO. 93-0056

**NOTICE OF DOCKETING
OF ADMINISTRATIVE LAW JUDGE'S DECISION**

The Administrative Law Judge's Report in the above referenced case was docketed with the Commission on December 8, 1994. The decision of the Judge will become a final order of the Commission on January 9, 1995 unless a Commission member directs review of the decision on or before that date. **ANY PARTY DESIRING REVIEW OF THE JUDGE'S DECISION BY THE COMMISSION MUST FILE A PETITION FOR DISCRETIONARY REVIEW.** Any such petition should be received by the Executive Secretary on or before December 28, 1994 in order to permit sufficient time for its review. See Commission Rule 91, 29 C.F.R. 2200.91.

All further pleadings or communications regarding this case shall be addressed to:

Executive Secretary
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Petitioning parties shall also mail a copy to:

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If a Direction for Review is issued by the Commission, then the Counsel for Regional Trial Litigation will represent the Department of Labor. Any party having questions about review rights may contact the Commission's Executive Secretary or call (202) 606-5400.

FOR THE COMMISSION

Ray H. Darling, Jr.
Executive Secretary

Date: December 8, 1994

DOCKET NO. 93-0056

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SECRETARY OF LABOR,
Complainant,

v.

THE BIONETICS CORPORATION,
Respondent.

OSHRC Docket No. 93-56

APPEARANCES:

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For Complainant

Charles H. Burr, Esquire
The Bionetics Corp.
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For Respondent

Before: Administrative Law Judge Nancy J. Spies

DECISION AND ORDER

Bionetics Corp. (Bionetics) contests separate serious and nonserious citations issued to it by the Occupational Safety and Health Administration (OSHA) on December 9, 1992, under the Occupational Safety and Health Act of 1970 (Act).¹ The citations followed an August 31 through October 29, 1992 inspection by OSHA Compliance Officer Keven Yarbrough. The alleged serious violations occurred while Bionetics employees worked on the Mobile Launch Platform (MLP) at the Kennedy Space Center (KSC), Florida, and participated in the nation's space shuttle launch.

¹ At the hearing, the Secretary withdrew items 4 and 5 of the serious citation (Tr. 7).

Specifically, OSHA charges that Bionetics violated § 1910.22(c) by failing to guard interior blast holes, § 1910.23(c)(1) by failing to guard the exterior perimeter of the MLP workstation, and § 1910.23(c)(2) by failing to guard the access ramp to the MLP. Identical violations were alleged for other contractors as well as for NASA.² The nonserious citation alleges that Bionetics failed to inform its employees of the existence, location and contents of its hazard communication program in violation of § 1910.1200(h)(1).

Bionetics is a diverse defense-related company, with its corporate headquarters in Hampton, Virginia. In January 1992, Bionetics entered into a contract with the United States Air Force requiring it to take and process photographs at various government installations. This included photographing the space shuttle launches at KSC (Tr. 269). Bionetics denies that its employees were exposed to the hazards OSHA alleges and asserts affirmative defenses.

Background--The Mobile Launch Platform

During an earlier stage of the launch process, one of the space shuttles was mounted onto the MLP at the Vehicle Assembly Building. When fully prepared, the MLP with the shuttle in place was driven to the launch pad. The Fixed Service Structure, a work staging area, was also mobile and was moved to or from the MLP depending upon the stage of the shuttle launch (Exh. C-2; Tr. 53, 88, 100).

The Mobile Launch Platform itself is a large rectangular structure made of reinforced steel rising 45 feet above ground level (Tr. 26)³ The MLP has interior levels but the top of the MLP, the "zero deck level," was the work location at issue. Fall protection on the MLP consisted of "removable guardrails." The guardrails were designed to be removable because they were not "survivable," *i.e.*, they could not survive the fire and force of a shuttle launch.

² Decisions issued in the consolidated case, *Rockwell International Corp, U.S.B.I Co., Martin Marietta Manned Space Systems and Thiokol Corp.*, Docket Nos. 93-54, 93-228, 93-233 and 93-234, respectively; and *Computer Sciences Raytheon*, Docket No. 93-232, also involved these asserted violations. Each decision was based on a separate record.

³ In the early 1970s NASA built three mobile launch platforms to launch its spacecraft including, more recently, the space shuttle. NASA variously uses three launch platforms. For purposes of this decision, the three are without significant differences (Tr. 32, 37, 70, 168).

During the shuttle launches of June 25 and July 31, 1992, removable guardrails protected three large interior openings in the MLP. These guardrails were removed to accommodate the shuttle's main engine (positioned over the largest opening) and two solid rocket boosters (SRBs) (sitting over the two smaller, parallel openings). These three blast holes descended through the MLP into the trough of a "flame trench." The flame trench minimized damage from the rocket blasts. The distance from the zero level deck to the base of the flame trench measured 95 feet (Tr. 99, 103).

Removable guardrails also protected the four sides of the perimeter of the MLP until the shuttle was readied for launch. The perimeter distance from the zero level deck to the ground level was 45 feet (Tr. 26).

Functioning much as a drawbridge, a portion of a ramp 6 to 8 feet long and 5 feet wide was lowered between the Fixed Service Structure and the MLP to allow access (Tr. 25). Prior to the September 12 launch, there was a gap in the ramp guardrails of approximately 3 feet. The distance from the ramp to the ground was 45 feet (Tr. 26).

CITATION NO. 1

Items 1 and 2: Alleged Violations of § 1910.22(c) and §1910.23(c)(1)

After the shuttle had lifted off and the site had been cleared by NASA safety personnel, the Fixed Surface Structure was moved back beside the MLP. The ramp was lowered between the structures, and Bionetics employees began removing film from camera boxes located in specific areas on the MLP (Tr. 121, 122). Retrieval of the film required employees to approach near the perimeter and near interior blast holes on the MLP.

The Secretary contends that the unguarded blast hole openings presented a fall hazard to Bionetics' employees in violation of § 1910.22(c)⁴ and that the unguarded

⁴ The standard requires:

§1910.22(c). *Covers and guardrails.* Covers and/or guardrails shall be provided to protect personnel from the hazards of open pits, tanks, vats, ditches, etc.

perimeter exposed them to a fall hazard in violation of § 1910.23(c)(1).⁵ The guardrails protecting the blast holes and the perimeter, which had been removed prior to launch, would not be completely replaced until after Bionetics had retrieved its film from the MLP (Tr. 103).

The Secretary admits that Bionetics was not in violation of these standards during the September 12, 1992 launch. (Employees used retractable lifelines to access camera boxes on September 12, 1992.) The asserted violation is based upon employee testimony of conditions existing after the earlier June 25 and July 31, 1992 launches. Since Bionetics furnished employees body harnesses and lanyards and enforced tying off when employees reached the camera boxes, the Secretary's charge is further limited to exposure while employees approached the camera boxes without fall protection (Tr. 9, 57, 60, 103).

To establish a violation of a specific standard, the Secretary must prove by a preponderance of the evidence that (1) the standard applies to the working conditions, (2) the terms of the standard were not met, (3) employees had access to the condition, and (4) the employer either knew of the condition or could have known with the exercise of reasonable diligence. *E.g., Kulka Constr. Mgt. Corp.*, 15 BNA OSHC 1870, 1992 CCH OSHD ¶ 29,829 (No. 88-1167, 1992); *Astra Pharmaceutical Prods.*, 9 BNA OSHC 2126, 2129, 1981 CCH OSHD ¶25,578, pp. 31,899-900 (No. 78-6247, 1981), *aff'd in pertinent part*, 681 F.2d 69 (1st Cir. 1982).

June 25, 1992 Launch

The weather conditions existing during the June 25, 1992 launch were unusually windy but, given the geographical location of the MLP, should not have been unexpected (Tr. 124-125, 279). Bionetics' employee Steven Hills described the weather on the MLP on June 25 as follows:

⁵ The standard provides:

§ 1910.23(c). *Protection of open-sided floors, platforms, and runways.* (1) Every open-sided floor or platform 4 feet or more above adjacent floor or ground level shall be guarded by a standard railing (or the equivalent as specified in paragraph (e)(3) of this section) on all open sides except where there is entrance to a ramp, stairway, or fixed ladder. . . .

It was around . . . 2:00 p.m. There was a high wind condition. As I recall, it was 40 knots. I think that came from the loudspeaker on the pad.⁶

And, the wind--the way the structure is located, the wind does a lot of different things . . . the wind was coming up through the openings in the decks. And, any of the deluge water that's still dripping was blowing vertical. In some places, it was blowing horizontal

[The surface] was real wet because the water was being blown all over the deck But enough water is dripping out of them that it's continuing to flow, like a half turn of a faucet at a house. And, there was residue from the solids on the deck, and that is generally pretty slippery (Tr. 109, 110).

Employee exposure must be assessed within this context.

The Interior Flame Holes

Mounted on the zero level deck were thirty-two camera boxes which were used to photograph the shuttle launch. (Exh. C-4).⁷

Employees retrieved film from three of the camera boxes (E-17, E-18, and EX-4) located on a "ledge" formed between the blast holes for the SRBs and the blast hole for the main rocket engine. Depending upon which MLP was used, this area varied from 6 feet 9 inches to 7 feet 11 inches (Tr. 32, 33). Employees approached camera boxes E-17 and E-18 by walking along the ledge (Tr. 136-137). In this area were raised plates, pipes and other tripping hazards (Exh. C-6; Tr. 137). Thus, although employees were tied off after they arrived at the camera boxes, as they approached these cameras, they were necessarily within 4 feet of the unguarded blast hole edges and a potential fall of 95 feet.

⁶ It may be likely that the wind speed did not actually reached 40 knots. However, this was the announcement that Hills and Joseph recalled hearing. There is no dispute that, as a Bionetics' supervisor put it, "The winds got quite strong out there" (Tr. 258).

⁷ Each camera box on the MLP is represented in Exhibit C-4 as E-1 through E-28 and EX-1 through EX-4. The Secretary alleges that cameras EX-4, E-17, and E-18 presented a hazard of falls into flame holes. (Although the Secretary contends that EX-1 would have presented a hazard, there is no evidence that any employee serviced that camera during the subject launches.) Camera boxes E-1, E-2, E-3, E-4, E-5, E-6, E-23, and E-24 allegedly exposed employees to perimeter falls (Exh. C-4; Tr. 41). On either or both of the June 25 or July 31, 1992 launches, employees serviced these camera boxes (Exh. C-4, pp. 2-5; Tr. 99, 183-84, 215-217 and 225-226).

The Perimeter

Employees also retrieved film from eight perimeter camera boxes (E-1, E-2, E-3, E-4, E-5, E-6, E-23 and E-24). When approaching cameras E-1 through E-6, employees were no more than 6 feet from an unprotected perimeter edge (Exh. C-5; Tr.41). As the activity is illustrated in photograph Exhibit R-3 (on an unidentified date), Hills had his back to the perimeter edge, substantially closer than 6 feet to that edge (Tr. 174).

Of special concern were cameras E-23 and E-24. These cameras were located along the midpoint of the south perimeter of the MLP. The cameras extended over another 4-foot wide ledge, which this time was formed between the southern end of the main engine blast hole and the southern perimeter of the MLP. On June 25, 1992, employee Sandra Joseph was assigned to retrieve film from cameras E-23 and E-24 (Tr. 190). Like Hills, she described how the weather “started to cloud up and get dark. And, we heard over the intercom . . . ‘winds gusting up to 40 knots.’ And, it was pretty dangerous out there” (Tr. 189). Although Hills and Joseph informed their supervisors, Scott Haun or Dan Cahill, of their particular apprehension about retrieving film from E-23 and E-24, Haun directed Joseph to “go do it” (Tr. 191, 193). Joseph “knelt down and crawled to those two boxes out there” (Tr. 191). Joseph later acknowledged that before she crawled to the cameras, Haun offered her the alternative of having someone else retrieve the cameras. Assuming this would simply mean her partner would be assigned the task, she declined the option (Tr. 196).

Exposure

Bionetics argues that there was no exposure because employees were cautious in approaching the cameras, tied off after reaching them, and proceeded without accident. Cautiousness does not negate exposure. The absence of injuries does not preclude a finding of exposure. Indeed, “[o]ne purpose of the Act is to prevent the first accident.” *Lee Way Motor Freight, Inc. v. Sec.*, 511 F.2d 864, 870 (10th Cir. 1975); *Simpex Time Recorder Co.*, 766 F.2d at 588 (D.C. Cir. 1985). Exposure to a “zone of danger” exists in objective terms. *Consol. Alum Corp.*, 9 BNA OSHC 1981, CCH OSHD ¶ 25,069 (No. 77-1091, 1980).

As stated, the surface of the MLP was uneven and wet, and had potential tripping hazards. The weather was windy. Employees walked or crawled along ledges where they were no more than 4 feet from the edges of interior or perimeter fall hazards. They carried sensitive equipment, which as Hills noted, "You try to be [aware of tripping hazards]. You're holding a \$40,000 camera. You don't want to drop that either" (Tr. 139). Under these conditions, employees were exposed to the zone of danger. A fall of 45 feet or 95 feet would predictably result in death.

Knowledge

Bionetics argues that it was without knowledge of the hazard because it was a relatively new contractor. While it was true that Bionetics performed work on the contract only since January 1, 1992, it was aware of the configuration of the camera boxes. Many Bionetics' employees, including supervisory employees, had been employees of the previous contractor (Tr. 145, 346). "Knowledge" is not awareness of being in violation of a cited standard but simply awareness of the physical conditions constituting a violation. *Hamilton Fixture*, 16 BNA OSHC 1889, 1993 CCH OSHD ¶ 30,034 (No. 88-1720, 1993), citing *Shaw Constr.*, 6 BNA OSHC 1341-43, 1978 CCH OSHD ¶ 22,524 (No. 3324, 1978). Further, Bionetics' supervisor specifically directed Joseph to perform work which exposed her to the violation.

Defenses

Bionetics contends that under the precedent of the *Anning Johnson/Grossman* rule,⁸ it has established the multi-employer worksite defense.⁹ That defense requires an employer, who did not create or control the violative condition, to establish that alternative protective measures were used or were unavailable. The burden of establishing each element of the defense lies with the employer. *Seibel Modern Mfg. & Welding Corp.*, 15 BNA

⁸ *Anning-Johnson Co.*, 4 BNA OSHC 1193, 1199, 1975-76 CCH OSHD pp. 20,690, 24,784 (No. 3694, 1976) (consolidated cases) and *Grossman Steel & Alum. Corp.*, 4 BNA OSHC 1185, 1188-89, 1975-76 CCH OSHD pp. 20,691, 24,791 (No. 12775, 1976).

⁹ Although the *Anning Johnson/Grossman* rule pertains to construction worksites, it can be applicable in this general industry case because the fact situation presents such unique similarities to a construction site.

OSHC 1218, 1226-28, 1991 CCH OSHD ¶ 29,442, pp. 39,682-85 (No. 88-821,1991) (burden of proof for alternative methods of protection upon the employer).

Nasa Created and Controlled the Hazard. NASA built the MLP, and it established the time sequence under which guardrails were removed and reinstalled and the film retrieved (Tr. 57, 72). Bionetics lacked authority or expertise to abate the violation by covering or guarding the flame holes or the perimeter. Such activity would be contrary to NASA's master sequencing plan. Further, extraneous materials could damage the shuttle and were not allowed on the MLP (Tr. 71). NASA, not Bionetics, created and controlled the hazards on the MLP.

NASA's Role. The Secretary suggests that the relationship of NASA and Bionetics is best analogized to that of a general contractor and its subcontractor on any multi-employer worksite. To the extent the analogy applies, it is with a significant caveat. The "general contractor" was NASA. NASA is responsible for launches of the nation's space shuttle, an achievement of monumental technical complexity. NASA asserts control over the precise timing and detailed sequencing of the myriad activities needed to launch and land the shuttle. This is especially true for the work on the MLP immediately before and after the launch. NASA strictly enforces what items can be taken onto the MLP and what activities can be performed there. NASA monitors all post-launch operations on the MLP (Tr. 71-73, 362).

NASA's status may logically impart a degree of confidence that when NASA required its contractor to perform activities on the MLP immediately after the launch, it was necessary that the task be performed at that time. It might also be inferred that NASA considered safety when the task was assigned. However, even recognizing NASA's role, NASA's contractors were not completely relieved of their obligation to protect their own employees while they were on the MLP. NASA's expertise is but one factor to be evaluated in determining the reasonableness of the alternative measures an employer may utilize to protect its employees from the hazards.

Bionetics Alternative Measures. Realistic measures can be less than full compliance because "[w]hat is realistic depends upon a balance of the hazard involved with considerations of efficiency, economy, and equity." *Hayden Electric Servs.*, 4 BNA

OSHC 1494, 1495, 1976-77 CCH OSHD ¶ 20,939, p. 25,149 (No. 4034, 1976). The conduct must be viewed in its totality and in terms of “whether a reasonable employer would have done more” under the circumstances. *Capform, Inc.*, 16 BNA OSHC 2040, (No. 91-1613, 1994), citing *Electric Smith, Inc. v. Secretary of Labor*, 666 F.2d 1267, 1273-74 (9th Cir. 1982).

When balancing the hazard against the employer’s safety efforts, it is obvious that if the hazard is more immediate, the efforts to protect against it must be greater. Where the gravity of the hazard is high, the duty on the employer is increased. Its efforts must be realistic, effective and reasonable.

Employees Hills and Joseph were exposed to highly hazardous conditions as they serviced cameras E-17, E-18, E-23 and E-24 on June 25, 1992. Even though NASA was the controlling employer, Bionetics was required to protect its employees in a realistic way. Under certain circumstances, realistic measures may even require that an employer remove its exposed employees. Here, at a minimum, Bionetics should have requested the option of waiting until the weather cleared before requiring employees to retrieve film from the four most exposed camera locations. To do less constituted a failure to utilize reasonable alternative measures to protect employees exposed to falls into the interior blast holes or off the perimeter of the MLP. Further, on the basis of this record, Bionetics could have earlier explored the possibility of using inertia reels, which it used on September 12, 1992. The defense is rejected.¹⁰

Violations of § 1910.22(c) and § 1910.23(c)(2) are affirmed as serious.

Item 3: Alleged Violation of § 1910.23(c)(2)

After each launch, the Fixed Surface Structure was moved back toward the MLP, the ramp was lowered between the two structures, and employees crossed over to the MLP. In preparation for the OSHA’s launch inspection, Yarbrough went to KSC. He advised NASA that an unguarded portion of that ramp presented a hazard. By the time of the

¹⁰ Although this is not the conclusion reached in one of the companion cases involving the NASA launches, the facts of that case are different. The noted perimeter cameras were not in issue there. Employees in that case approached the two most hazardous interior cameras while they were tied off. The weight of the hazard was substantially less than presented here.

September 12 launch, an additional railing had been clamped onto the existing railings to cover the guardrail gap. The gap had been 3 feet long; the ramp was 5 feet wide (Tr. 27-28). The Secretary charged a violation relying on the fact that this portion of the guardrails was missing during the June 25, 1992, and July 31, 1992 launches in violation of § 1910.23(c)(2).¹¹

As employees crossed the ramp, they pushed a cart holding their tools, body harness, and other equipment (Tr. 149). Weather conditions were windy. A 2-foot proximity to the fall hazard placed employees within the zone of danger for the short period of time needed to walk 3 feet. Bionetics' employees were exposed to a fall of 45 feet from the unguarded portion of the ramp during the two launches. A fall would most predictably result in death. The existence of the gap in the guardrails was easily observable. Bionetics' supervisors crossed the ramp on both launch dates. Bionetics had knowledge of the violative condition.

Multi-Employer Defense

As with the earlier items, Bionetics contends that it met the multi-employer worksite defense. The defense fails for many of the same reasons previously discussed. In addition, there were not logistical and technological difficulties involved with abating the violation. Bionetics could have accomplished literal compliance with the guardrail requirements for the ramp, even if it would be required to first secure NASA's agreement. Abatement could easily be achieved by clamping or roping on another guardrail section onto the existing railings. Since NASA did not assert the same type of control over access from the Fixed Surface Structure as it did for the MLP, a request to NASA to correct the hazard or to allow Bionetics to do so could not be assumed to be futile. NASA's "quick look" of film taken of the launches would not be delayed. Bionetics' failure to inquire of NASA regarding the

¹¹ The standard requires:

§1910.23(c) *Protection of open-sided floors, platforms, and runways.* (2) Every runway shall be guarded by a standard railing (or the equivalent as specified in paragraph (e)(3) of this section) on all open sides 4 feet or more above floor or ground level.

abatement was not reasonable and did not constitute realistic alternative measures. The multi-employer defense is rejected.

The violation is affirmed as serious.

CITATION NO. 2

Item 1. § 1910.1200(h)(1)--Hazard Communication

The Secretary contends that Bionetics failed to inform and train one employee concerning its hazard communication program in violation of § 1910.1200(h).¹² This violation allegedly occurred at the film processing laboratory at Cape Canaveral Air Station, Florida, where employees worked with hazardous chemicals. The Secretary concedes that Bionetics had an adequate program, which it kept in the supervisor's office on site (Tr. 76). Yarbrough reported that he spoke with employees regarding the hazard communication program. One employee, Sam Diomede, a chemical technician, did not know that Bionetics had a program or where it was located. However, Diomede reported to Yarbrough that he kept his own material safety data sheets (Tr. 77). Bionetics asserts that all employees had been trained and should have known of the location of its written program.

Some confusion on Yarbrough's part might have been expected. He was not aware that all training on hazard communication at KSC was conducted annually by Johnson Controls. Yarbrough conceded that another company may provide training as long as it is site specific (Tr. 75). The fact that Diomede told Yarbrough that he had not been trained by Bionetics, thus, does not mean that he was not trained. Secondly, in January 1992, Bionetics took over the contract from the previous contractor, TGS. Bionetics acquired and continued to employ all of TGS's former employees (Tr. 145). By that date Johnson

¹² The standard provides:

§ 1910.1200(h) *Employee information and training.* Employers shall provide employees with information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new hazard is introduced into their work area. (1) *Information.* Employees shall be informed of:

. . . (iii) The location and availability of the written hazard communication program, including the required list(s) of hazardous chemicals, and material safety data sheets required by this section.

Controls had already conducted its annual training for the TGS (now Bionetics) employees. There was nothing to contradict the inference that Diomede received this training, especially since he stated that he had been trained with his previous employers. Although the employees did not readily locate Bionetics' hazard communication program in response to Yarbrough's inquiry, all (except Diomede) stated they knew where it was located. The employees did locate the program (Tr. 78-79). Diomede may have been less interested in recalling the location of the program since he kept his own MSDS. The weight of the evidence supports the conclusion that Bionetics complied with the standard.

The violation is vacated.

Penalty

The Commission and its judges have final authority to assess penalties in all contested cases. *Hern Iron Works, Inc.*, 16 BNA OSHC 1619, 1621-23, 1994 CCH OSHD ¶ 30,363, pp. 41,881-83 (No. 88-1962, 1994). It must give "due consideration" to the size of the employer's business, the gravity of the violation, the good faith of the employer, and the history of previous violations in determining the appropriate penalty. *J.A. Jones Constr. Co.*, 15 BNA OSHC 2201, 2213-14, 1993 CCH OSHD ¶ 29,964, p. 41,032 (No. 87-2059, 1993). These factors are not necessarily accorded equal weight. The gravity of the violation is the primary element in the penalty assessment. *Trinity Indus.*, 15 BNA OSHC 1481, 1483, 1992 CCH OSHD ¶ 29,582, p. 40,033 (No. 88-691, 1992).

Bionetics is a medium-sized employer, having 2,200 employees nationwide (Tr. 51). It has no history of previous violations (Tr.50) Weighing toward a finding of good faith is Bionetics' responsive attitude toward safety-related suggestions, which it facilitates and encourages. For example, the clamp for the lanyards was quickly modified in response to an employee request (Tr. 146-147). The company cooperated with the inspection (Tr. 85). All three violations were abated even before the physical inspection of the launch on September 12, 1992. Also noted, however, is Bionetics' infrequent safety meetings and the fact that there is no evidence that it actually has its own safety program (Tr. 230, 248).

Six technicians and one or two supervisors were exposed to fall hazards. The similarities in the location and type of hazards have also been considered in assessing

